Ferrellgas, Inc. (Buckeye Gas Products)
NE/NW Sec. 8, T18N, R24E Apache #606

P-W

COUNTY Apache AREA 16 mi. E of Holbrook LEASE NO. Williams Energy Fee

WELL NAME ~~WILLIAMS ENERGY COMPANY~~ Buckeye Gas Products Co. Adamana NO. 5 ~~1-8 st~~

LOCATION NW/NW SEC 8 TWP 18N RANGE 24E FOOTAGE 660 S & 618 E of NW/corner

ELEV 5330.22 GR 5334 KB SPUD DATE 1-30-73 STATUS LPG Storage COMP. DATE 2-~~8~~-73 12 TOTAL DEPTH 1119

CONTRACTOR J. B. Barnes Drilling Company

| CASING SIZE | DEPTH | CEMENT | LINER SIZE & DEPTH |
|---|---|---|---|
| 13 3/8 | 151 | 170 sx | |
| 9 5/8 | 933 | 350 sx | |
| | | | |

DRILLED BY ROTARY X
DRILLED BY CABLE TOOL
PRODUCTIVE RESERVOIR
INITIAL PRODUCTION

| FORMATION TOPS | DEPTHS | SOURCE L.L. | SOURCE E.L. | REMARKS |
|---|---|---|---|---|
| Coconino | 352 | | X | Sample description in file |
| Salt | 918 | | X | |

| ELECTRIC LOGS | PERFORATED INTERVALS | PROD. INTERVALS |
|---|---|---|
| Compensated Neutron - 1 | open hole completion | |

SAMPLE LOG
SAMPLE DESCRP. X
SAMPLE NO. 1718
CORE ANALYSIS
DSTs

REMARKS L.P.G. STORAGE WELL

APP. TO PLUG
PLUGGING REP.
COMP. REPORT 3-27-73

WATER WELL ACCEPTED BY

BOND CO. ~~Federal Insurance Company~~ The Aetna Casualty & Surety Co. St. Paul Fire + Marine Ins. Co. BOND NO. ~~8047-02-65~~ S40-32083 DATE 1-15-80

BOND AMT. $ 25,000 CANCELLED ORGANIZATION REPORT 11-21-72

FILING RECEIPT 2944 LOC. PLAT X WELL BOOK X PLAT BOOK X

API NO. 02-001-20180 DATE ISSUED 2-2-73 DEDICATION NA

PERMIT NUMBER 606

(over)

DRILL STEM TEST

| NO. | FROM | TO | RESULTS |
|---|---|---|---|
| | | | |
| | | | None |
| | | | |
| | | | |
| | | | |

CORE RECORD

| NO. | FROM | TO | RECOVERY | REMARKS |
|---|---|---|---|---|
| | | | | |
| | | | | No Cores Reported |
| | | | | |
| | | | | |
| | | | | |

REMEDIAL HISTORY

| DATE STARTED | COMPLETED | WORK PERFORMED | NEW PERFORATIONS |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

ADDITIONAL INFORMATION

When washing is completed, operators will furnish drawing showing approximate size and shape of reservoir.

RECEIVED

JUN 22 1982

O & G CONS. COMM.

# WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

DESIGNATE TYPE OF COMPLETION:

New Well [X] Work-Over [ ] Deepen [ ] Plug Back [ ] Same Reservoir [ ] Different Reservoir [ ] Oil [ ] Gas [ ] Dry [ ]

## DESCRIPTION OF WELL AND LEASE

| | |
|---|---|
| Operator: BUCKEYE GAS PRODUCTS CO. | Address: P.O. BOX 3478 TULSA, OK. 74101 |
| Federal, State or Indian Lease Number or name of lessor if free lease: BUCKEYE GAS PRODUCTS CO. | Well Number: C5 / Field & Reservoir: ADAMANA, AZ. |
| Location: 660.00 FSL - 618.00 FWL | County: APACHE |
| Sec. TWP-Range or Block & Survey: SECTION 8, T-18N R-24E G. & S.R. B. & M. | |

| Date spudded | Date total depth reached | Date completed, ready to produce | Elevation (DF, RKB, RT or Gr.) | Elevation of casing hd. flange |
|---|---|---|---|---|
| 1-30-73 | 2-8-73 | 2-12-73 | 5330 feet | 5334 feet |

| Total depth | P.B.T.D. | Single, dual or triple completion? | If this is a dual or triple completion, furnish separate report for each completion. |
|---|---|---|---|
| 1119 | - | SALT SOLUTION WELL | |

| Producing interval (s) for this completion | Rotary tools used (interval) | Cable tools used (interval) |
|---|---|---|
| 937 TO 1112 | G.L. TO T.D. | - |

| Was this well directionally drilled? | Was directional survey made? | Was copy of directional survey filed? | Date filed |
|---|---|---|---|
| NO | NO | NO | - |

Type of electrical or other logs run (check logs filed with the commission): GAMMA RAY NEUTRON, CEMENT BOND LOG. Date filed:

## CASING RECORD

Casing (report all strings set in well — conductor, surface, intermediate, producing, etc.)

| Purpose | Size hole drilled | Size casing set | Weight (lb./ft.) | Depth set | Sacks cement | Amt. pulled |
|---|---|---|---|---|---|---|
| SURFACE | 17½ | 13 3/8 | 48 lbs. | 155 | 175 | 0 |
| PROTECTION | 12¼ | 9 5/8 | 32.3 | 937 | 350 | 0 |
| INTERMEDIATE | 12¼ | 7 | 20 | 947 | HUNG-UNCEMENTED | |
| SOLUTION | 12¼ | 4½ | 9.5 | 1112 | HUNG-UNCEMENTED | |

**TUBING RECORD**

| Size (in.) | Depth set (ft.) | Packer set at (ft.) |
|---|---|---|
| | | |

**LINER RECORD**

| Size (in.) | Top (ft.) | Bottom (ft.) | Sacks cement | Screen (ft) |
|---|---|---|---|---|
| | | | | |

**PERFORATION RECORD**

| Number per ft. | Size & type | Depth Interval |
|---|---|---|
| | | |

**ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD**

| Am't. & kind of material used | Depth Interval |
|---|---|
| | |

## INITIAL PRODUCTION

Date of first production: | Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump:):

| Date of test | Hrs. tested | Choke size | Oil prod. during test (bbls.) | Gas prod. during test (MCF) | Water prod. during test (bbls.) | Oil gravity (°API (Corr)) |
|---|---|---|---|---|---|---|
| | | | | | | |

| Tubing pressure | Casing pressure | Cal'ted rate of Production per 24 hrs. | Oil (bbls.) | Gas (MCF) | Water (bbls.) | Gas-oil ratio |
|---|---|---|---|---|---|---|
| | | | | | | |

Disposition of gas (state whether vented, used for fuel or sold):

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Mgr of the Buckeye (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

6-28-82
Date

Amado Padilla
Signature

Permit No. 606

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Well Completion or Recompletion Report and Well Log
File One Copy
Form No. 4

## DETAIL OF FORMATIONS PENETRATED

| FORMATION | TOP | BOTTOM | DESCRIPTION* |
|---|---|---|---|
| SURFACE SOIL | 0 | 20 | SAND |
| | 20 | 52 | RED CLAY |
| | 52 | 80 | CLAY AND SAND SHELL |
| | 80 | 178 | SAND SHELL AND CLAY |
| | 178 | 224 | SAND |
| | 224 | 322 | SANDY SHALE |
| | 322 | 352 | SHALEY SAND |
| COCONINO | 350 | 796 | COCONINO |
| | 796 | 831 | SHALE |
| | 831 | 836 | ANHYDRITE |
| | 836 | 841 | SHALE |
| | 841 | 859 | ANHYDRITE |
| | 859 | 870 | SHALE |
| | 870 | 874 | ANHYDRITE |
| | 874 | 877 | SHALE |
| | 877 | 888 | SALT |
| | 888 | 902 | SHALE |
| | 902 | 906 | SALT |
| | 906 | 910 | POTASH |
| | 910 | 918 | SANDY SHALE |
| | 918 | 1116 | SALT |
| | 1116 | 1120 | SHALE |

* Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

INSTRUCTIONS:

Attach drillers log or other acceptable log of well.

This Well Completion or Recompletion re[illegible] and well log shall be filed with the State of Arizona [illegible] & Gas Conservation Commission not later than thirty days after project completion.

Form No. 4

# WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

DESIGNATE TYPE OF COMPLETION:

New Well [X] Work-Over [ ] Deepen [ ] Plug Back [ ] Same Reservoir [ ] Different Reservoir [ ] Oil [ ] Gas [ ] Dry [X]

## DESCRIPTION OF WELL AND LEASE

| | |
|---|---|
| Operator: Williams Energy Company | Address: P. O. Box 3478 Tulsa, Oklahoma 74101 |
| Federal, State or Indian Lease Number or name of lessor if fee lease: Williams Energy Company | Well Number: 5 / Field & Reservoir: Unnamed |
| Location: 660.0 South & 618.0 East of N.W. Corner | County: Apache |
| Sec. TWP-Range or Block & Survey: Sec. 8 T-18-N, R-24-E, G. & S.R.B. & M. | |

| Date spudded | Date total depth reached | Date completed, ready to produce | Elevation (DF, RKB, RT or Gr.) feet | Elevation of casing hd. flange feet |
|---|---|---|---|---|
| 1/30/73 | 2/8/73 | Dry | 5330.22 | 5332.0 |

| Total depth | P.B.T.D. | Single, dual or triple completion? | If this is a dual or triple completion, furnish separate report for each completion. |
|---|---|---|---|
| 1119' | --- | Salt Solution | |

| Producing interval (s) for this completion | Rotary tools used (interval) | Cable tools used (interval) |
|---|---|---|
| N/A | 0-1119' | NO |

| Was this well directionally drilled? | Was directional survey made? | Was copy of directional survey filed? | Date filed |
|---|---|---|---|
| NO | N/A | N/A | N/A |

| Type of electrical or other logs run (check logs filed with the commission) | Date filed |
|---|---|
| Compensated Neutron Log | With this report |

## CASING RECORD

Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)

| Purpose | Size hole drilled | Size casing set | Weight (lb./ft.) | Depth set | Sacks cement | Amt. pulled |
|---|---|---|---|---|---|---|
| Surface | 17 1/2" | 13-3/8" | 48 | 151' | 175 | 0 |
| Protection | 12 1/4" | 9-5/8" | 32.75 | 933' | 350 | 0 |
| Solution | 12 1/4" | 7 " | 20.0 | 943' | Hung-uncemented | |
| Solution | --- | 4-1/2" | 9.5 | 1108' | Hung-uncemented | |

| TUBING RECORD | | | LINER RECORD | | | | |
|---|---|---|---|---|---|---|---|
| Size in. | Depth set ft. | Packer set at ft. | Size in. | Top ft. | Bottom ft. | Sacks cement | Screen (ft.) |
| | | | | | | | |

| PERFORATION RECORD | | | ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD | |
|---|---|---|---|---|
| Number per ft. | Size & type | Depth Interval | Am't. & kind of material used | Depth Interval |
| | | | | |

## INITIAL PRODUCTION

| Date of first production | Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump:) |
|---|---|
| N/A | N/A |

| Date of test | Hrs. tested | Choke size | Oil prod. during test | Gas prod. during test | Water prod. during test | Oil gravity |
|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A bbls. | N/A MCF | N/A bbls. | N/A° API (Corr) |

| Tubing pressure | Casing pressure | Cal'ted rate of Production per 24 hrs. | Oil | Gas | Water | Gas—oil ratio |
|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A bbls. | N/A MCF | N/A bbls. | N/A |

Disposition of gas (state whether vented, used for fuel or sold):
N/A

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Manager of Operations of the Williams Energy Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

3/27/73
Date

Robert W. Smith
Signature

RECEIVED
MAR 29 1973
O & G CONS. COMM.

Permit No. 606

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Well Completion or Recompletion Report and Well Log
File One Copy
Form No. 4

(Complete Reverse Side)

## DETAIL OF FORMATIONS PENETRATED

| Formation | Top | Bottom | Description* |
|---|---|---|---|
| Surface | 0 | 20 | Surface Soil |
| | 20 | 52 | Red Clay |
| | 52 | 80 | Clay and Sand Shell |
| | 80 | 178 | Sand Shells and Clay |
| | 178 | 224 | Sand |
| | 224 | 322 | Sandy-Shale |
| | 322 | 352 | Shaley Sand-top Coconino Zone |
| Coconino | 352 | 796 | Sand-top Coconino |
| | 796 | 831 | Shale |
| | 831 | 836 | Anhydrite |
| | 836 | 841 | Shale |
| | 841 | 859 | Anhydrite |
| | 859 | 870 | Shale |
| | 870 | 874 | Anhydrite |
| | 874 | 877 | Shale |
| | 877 | 888 | Salt |
| | 888 | 902 | Shale |
| | 902 | 906 | Salt |
| | 906 | 910 | Potash |
| | 910 | 918 | Sandy Shale |
| | 918 | 1116 | Salt |
| | 1116 | 1120 | Shale |

* Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

INSTRUCTIONS:

Attach drillers log or other acceptable log of well.

This Well Completion or Recompletion [illegible] and well log shall be filed with the State of Arizona Oil & Gas Conservation Commission not later than thirty days after project completion.

Form No. 4

3-1-73 WD

Samples on the following wells have been received.

Williams Energy Co, #3 - #4 - #5 - #6
Sec.8-18N-24E
Apache C. Ariz.

Permit # 602-603-606-607

Four Corners Sample Cut

RECEIVED
MAR 05 1973
O & G CONS. COMM.

606

# APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL XX  RE-ENTER OLD WELL ☐

Williams Energy Company
NAME OF COMPANY OR OPERATOR

P. O. Box 3478 | Tulsa | Oklahoma
Address | City | State

J. O. Barnes Drilling Service
Drilling Contractor

P. O. Box 141 Casa Grande, Arizona 85222
Address

DESCRIPTION OF WELL AND LEASE

| Federal, State or Indian Lease Number, or if fee lease, name of lessor | Well number | Elevation (ground) |
|---|---|---|
| Williams Energy Company | 5 | 5330.22 |

| Nearest distance from proposed location to property or lease line: | Distance from proposed location to nearest drilling, completed or applied—for well on the same lease: |
|---|---|
| 618 feet | 490 feet |

| Number of acres in lease: | Number of wells on lease, including this well, completed in or drilling to this reservoir: |
|---|---|
| 114 | 6 |

If lease, purchased with one or more wells drilled, from whom purchased: Name: N/A  Address:

| Well location (give footage from section lines) | Section—township—range or block and survey | Dedication (Comply with Rule 105) |
|---|---|---|
| 660.0 South & 618.00 East of N.W. Corner | Sec. 8T-18-N, R24E, G & S.R.B & M | |

| Field and reservoir (if wildcat, so state) | County |
|---|---|
| Unnamed | Apache |

Distance, in miles, and direction from nearest town or post office
16 miles west to Holbrook, Arizona

| Proposed depth: | Rotary or cable tools | Approx. date work will start |
|---|---|---|
| 1100 | Rotary | January 24, 1973 |
| Bond Status<br>Amount | Organization Report<br>On file Yes Or attached | Filing Fee of $25.00<br>Attached Yes |

Remarks:

Request that Commission grant an exception to Rule 105 describing minimum distances since these wells are part of a propane storage cavern complex in a salt strata.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Manager of Operations of the Williams Energy (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

RECEIVED
FEB 02 1973
O & G CONS. COMM.

Robert J. Wyrath
Signature

1/22/73
Date

Permit Number: 606
Approval Date:
Approved By:

Notice: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Application to Drill or Re-enter
File Two Copies

Form No. 3

(Complete Reverse Side)

1. Operator shall outline the dedicated acreage for *both* oil and gas wells on the plat.

2. A registered professional engineer or land surveyor registered in the State of Arizona or approved by the Commission shall show on the plat the location of the well and certify this information in the space provided.

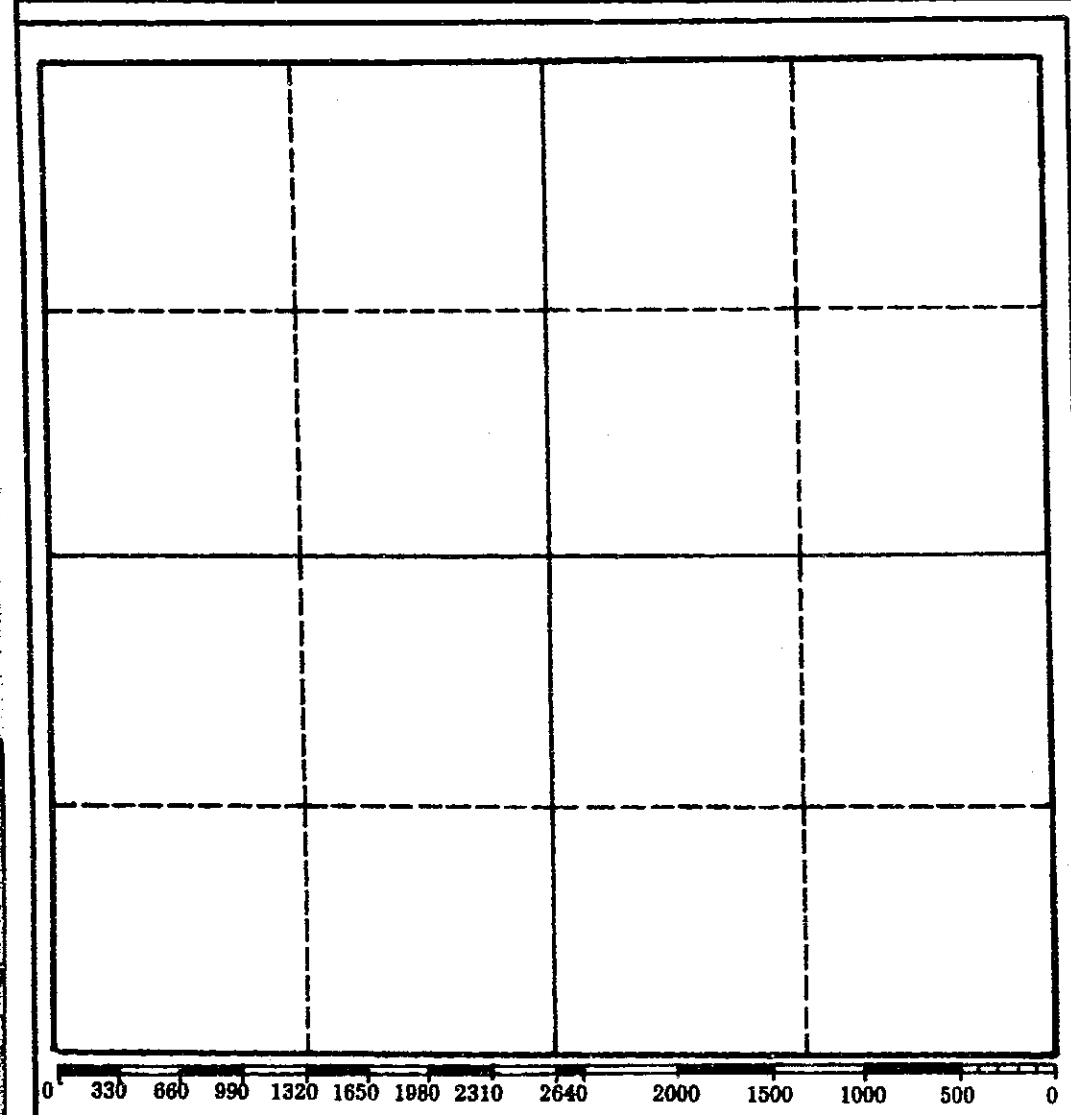
3. All distances shown on the plat must be from the outer boundaries of the Section.

4. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES X NO_____.

5. If the answer to question four is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES_____ NO_____. If answer is "yes," Type of Consolidation_____

6. If the answer to question four is "no," list all the owners and their respective interests below:

| Owner | Land Description |
|---|---|
| | |




**CERTIFICATION**

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Name

Position

Company

Date

I hereby certify that the well location shown on the plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

PROPOSED CASING PROGRAM

| Size of Casing | Weight | Grade & Type | Top | Bottom | Cementing Depths | Sacks Cement |
|---|---|---|---|---|---|---|
| 13 3/8" | 48 | H-40 | G.L. | 150' | Top to Bottom | |
| 9 5/8" | 32.3 | H-40 | G.L. | 900' | Top to Bottom | |

# PERMIT TO DRILL

This constitutes the permission and authority from the

OIL AND GAS CONSERVATION COMMISSION,
STATE OF ARIZONA,

To: WILLIAMS ENERGY COMPANY
(OPERATOR)

to drill a well to be known as

WILLIAMS ENERGY COMPANY WELL NO. 5
(WELL NAME)

located 660.0 South & 618.00 East of N.W. Corner

Section 8 Township 18N Range 24E, Apache County, Arizona.

The NA (LPG STORAGE WELL) of said Section, Township and Range is dedicated to this well.

Said well is to be drilled substantially as outlined in the attached Application and must be drilled in full compliance with all applicable laws, statutes, rules and regulations of the State of Arizona.

Issued this 2nd day of February, 19 73.

OIL AND GAS CONSERVATION COMMISSION

By W.E. Allen
EXECUTIVE SECRETARY

PERMIT Nº 606

RECEIPT NO. 2944

API NO. 02-001-20180.

State of Arizona
Oil & Gas Conservation Commission
Permit to Drill

FORM NO. 27

SAMPLES ARE REQUIRED

# SONAR SURVEY

MICRO GAGE, INC.

**FERRELLGAS**
**WELL NO. 5** P/N 606
**MARCH 1, 1989**
**ADAMANA FIELD HOLBROOK, ARIZONA**

CUSTOMER REP : DAVE JONES
JOB NO: 60
SONAR OPERATOR: J. CHILDRESS
HOIST OPERATOR: J. CHILDRESS

WELL DATA:
PERMANENT DATUM: B.H.F.
ZERO: B.H.F.
CASING DIA: 9-5/8"
CASING DEPTH: 936'
INTERMEDIATE DIA : 7"
INTERMEDIATE DEPTH : OUT FOR SONAR
TUBING DIA : 4 1/2"
TUBING DEPTH : OUT FOR SONAR
CUSTOMER T.D. 1038'
SONAR T.D. 1037'

VOLUME REPORT

| DEPTH feet | meters | INCR ft³ | TOTAL ft³ | INCR m³ | TOTAL m³ | INCR bbls | TOTAL bbls |
|---|---|---|---|---|---|---|---|
| 937 | 285.5 | 0 | 0 | 0.0 | 0 | 0.0 | 0 |
| 938 | 285.9 | 124 | 124 | 3.5 | 3 | 22.0 | 22 |
| 939 | 286.2 | 474 | 599 | 13.4 | 16 | 84.4 | 106 |
| 940 | 286.5 | 971 | 1570 | 27.4 | 44 | 172.9 | 279 |
| 941 | 286.8 | 2266 | 3837 | 64.1 | 108 | 403.5 | 683 |
| 942 | 287.1 | 4647 | 8485 | 131.6 | 240 | 827.6 | 1511 |
| 943 | 287.4 | 5674 | 14160 | 160.6 | 401 | 1010.5 | 2521 |
| 944 | 287.7 | 4820 | 18980 | 136.5 | 537 | 858.4 | 3380 |
| 945 | 288.0 | 4217 | 23197 | 119.4 | 656 | 751.0 | 4131 |
| 946 | 288.3 | 3826 | 27024 | 108.3 | 765 | 681.4 | 4812 |
| 947 | 288.6 | 3433 | 30458 | 97.2 | 862 | 611.4 | 5424 |
| 948 | 288.9 | 3041 | 33500 | 86.1 | 948 | 541.6 | 5966 |
| 949 | 289.2 | 2552 | 36052 | 72.2 | 1020 | 454.5 | 6420 |
| 950 | 289.5 | 2000 | 38053 | 56.6 | 1077 | 356.2 | 6777 |
| 951 | 289.8 | 1551 | 39605 | 43.9 | 1121 | 276.2 | 7053 |
| 952 | 290.1 | 1190 | 40796 | 33.7 | 1155 | 211.9 | 7265 |
| 953 | 290.4 | 965 | 41761 | 27.3 | 1182 | 171.8 | 7437 |
| 954 | 290.7 | 848 | 42610 | 24.0 | 1206 | 151.0 | 7588 |
| 955 | 291.0 | 757 | 43367 | 21.4 | 1228 | 134.8 | 7723 |
| 956 | 291.3 | 690 | 44057 | 19.5 | 1247 | 122.8 | 7846 |
| 957 | 291.6 | 1831 | 45889 | 51.8 | 1299 | 326.1 | 8172 |
| 958 | 291.9 | 5826 | 51716 | 164.9 | 1464 | 1037.6 | 9210 |
| 959 | 292.3 | 9549 | 61266 | 270.4 | 1735 | 1700.6 | 10911 |
| 960 | 292.6 | 11999 | 73266 | 339.8 | 2074 | 2137.0 | 13048 |
| 961 | 292.9 | 13290 | 86556 | 376.3 | 2451 | 2366.9 | 15415 |
| 962 | 293.2 | 12798 | 99355 | 362.4 | 2813 | 2279.3 | 17695 |
| 963 | 293.5 | 12295 | 111650 | 348.1 | 3161 | 2189.7 | 19884 |
| 964 | 293.8 | 11766 | 123416 | 333.2 | 3495 | 2095.5 | 21980 |
| 965 | 294.1 | 11375 | 134791 | 322.1 | 3817 | 2025.8 | 24006 |
| 966 | 294.4 | 11119 | 145911 | 314.8 | 4132 | 1980.2 | 25986 |
| 967 | 294.7 | 11064 | 156975 | 313.3 | 4445 | 1970.4 | 27957 |
| 968 | 295.0 | 11213 | 168188 | 317.5 | 4763 | 1997.0 | 29954 |
| 969 | 295.3 | 11324 | 179513 | 320.6 | 5083 | 2016.8 | 31971 |
| 970 | 295.6 | 11398 | 190912 | 322.7 | 5406 | 2029.9 | 34001 |
| 971 | 295.9 | 11312 | 202224 | 320.3 | 5726 | 2014.6 | 36016 |
| 972 | 296.2 | 11075 | 213300 | 313.6 | 6040 | 1972.4 | 37988 |
| 973 | 296.5 | 10700 | 224001 | 303.0 | 6343 | 1905.6 | 39894 |
| 974 | 296.8 | 10182 | 234183 | 288.3 | 6632 | 1813.4 | 41707 |
| 975 | 297.1 | 10235 | 244419 | 289.8 | 6921 | 1822.8 | 43531 |
| 976 | 297.4 | 11010 | 255430 | 311.8 | 7233 | 1960.8 | 45492 |
| 977 | 297.7 | 11664 | 267094 | 330.3 | 7564 | 2077.3 | 47569 |
| 978 | 298.0 | 12041 | 279135 | 341.0 | 7905 | 2144.5 | 49713 |
| 979 | 298.3 | 12478 | 291613 | 353.3 | 8258 | 2222.3 | 51936 |
| 980 | 298.7 | 12972 | 304586 | 367.3 | 8625 | 2310.3 | 54246 |
| 981 | 299.0 | 13365 | 317952 | 378.4 | 9004 | 2380.3 | 56627 |
| 982 | 299.3 | 13649 | 331601 | 386.5 | 9390 | 2430.8 | 59058 |
| 983 | 299.6 | 13803 | 345404 | 390.9 | 9781 | 2458.3 | 61516 |
| 984 | 299.9 | 13822 | 359227 | 391.4 | 10173 | 2461.6 | 63978 |
| 985 | 300.2 | 13777 | 373005 | 390.1 | 10563 | 2453.6 | 66432 |
| 986 | 300.5 | 13666 | 386672 | 387.0 | 10950 | 2433.9 | 68866 |
| 987 | 300.8 | 13576 | 400248 | 384.4 | 11335 | 2417.8 | 71284 |
| 988 | 301.1 | 13508 | 413757 | 382.5 | 11717 | 2405.7 | 73690 |
| 989 | 301.4 | 13355 | 427112 | 378.2 | 12095 | 2378.5 | 76068 |
| 990 | 301.7 | 13120 | 440233 | 371.5 | 12467 | 2336.6 | 78405 |

VOLUME REPORT

| DEPTH feet | DEPTH meters | INCR ft³ | TOTAL ft³ | INCR m³ | TOTAL m³ | INCR bbls | TOTAL bbls |
|---|---|---|---|---|---|---|---|
| 991 | 302.0 | 12838 | 453071 | 363.5 | 12830 | 2286.4 | 80691 |
| 992 | 302.3 | 12514 | 465586 | 354.3 | 13185 | 2228.7 | 82920 |
| 993 | 302.6 | 12526 | 478112 | 354.7 | 13540 | 2230.8 | 85151 |
| 994 | 302.9 | 12880 | 490993 | 364.7 | 13904 | 2293.9 | 87445 |
| 995 | 303.2 | 13461 | 504455 | 381.2 | 14286 | 2397.4 | 89843 |
| 996 | 303.5 | 14295 | 518750 | 404.8 | 14691 | 2545.9 | 92389 |
| 997 | 303.8 | 14791 | 533541 | 418.8 | 15109 | 2634.2 | 95023 |
| 998 | 304.1 | 14915 | 548457 | 422.3 | 15532 | 2656.3 | 97680 |
| 999 | 304.4 | 14872 | 563329 | 421.1 | 15953 | 2648.7 | 100328 |
| 1000 | 304.8 | 14662 | 577992 | 415.2 | 16368 | 2611.3 | 102940 |
| 1001 | 305.1 | 14390 | 592382 | 407.5 | 16776 | 2562.8 | 105503 |
| 1002 | 305.4 | 14060 | 606443 | 398.1 | 17174 | 2504.0 | 108007 |
| 1003 | 305.7 | 13891 | 620334 | 393.3 | 17567 | 2473.9 | 110481 |
| 1004 | 306.0 | 13882 | 634217 | 393.1 | 17961 | 2472.3 | 112954 |
| 1005 | 306.3 | 13778 | 647996 | 390.1 | 18351 | 2453.8 | 115408 |
| 1006 | 306.6 | 13580 | 661576 | 384.5 | 18735 | 2418.5 | 117826 |
| 1007 | 306.9 | 13272 | 674848 | 375.8 | 19111 | 2363.7 | 120190 |
| 1008 | 307.2 | 12860 | 687709 | 364.1 | 19475 | 2290.3 | 122480 |
| 1009 | 307.5 | 12475 | 700184 | 353.2 | 19829 | 2221.7 | 124702 |
| 1010 | 307.8 | 12123 | 712307 | 343.3 | 20172 | 2159.1 | 126861 |
| 1011 | 308.1 | 12083 | 724391 | 342.1 | 20514 | 2151.9 | 129014 |
| 1012 | 308.4 | 12363 | 736755 | 350.1 | 20864 | 2201.8 | 131216 |
| 1013 | 308.7 | 12664 | 749419 | 358.6 | 21223 | 2255.4 | 133471 |
| 1014 | 309.0 | 12986 | 762405 | 367.7 | 21591 | 2312.8 | 135784 |
| 1015 | 309.3 | 12832 | 775237 | 363.4 | 21954 | 2285.3 | 138069 |
| 1016 | 309.6 | 12199 | 787437 | 345.4 | 22300 | 2172.6 | 140242 |
| 1017 | 309.9 | 11580 | 799018 | 327.9 | 22628 | 2062.3 | 142305 |
| 1018 | 310.2 | 10979 | 809998 | 310.9 | 22939 | 1955.3 | 144260 |
| 1019 | 310.5 | 10313 | 820311 | 292.0 | 23231 | 1836.7 | 146097 |
| 1020 | 310.8 | 9598 | 829910 | 271.8 | 23503 | 1709.4 | 147806 |
| 1021 | 311.2 | 8940 | 838850 | 253.1 | 23756 | 1592.2 | 149399 |
| 1022 | 311.5 | 8339 | 847189 | 236.1 | 23992 | 1485.1 | 150884 |
| 1023 | 311.8 | 8516 | 855706 | 241.1 | 24233 | 1516.6 | 152401 |
| 1024 | 312.1 | 10193 | 865899 | 288.6 | 24522 | 1815.3 | 154216 |
| 1025 | 312.4 | 10983 | 876882 | 311.0 | 24833 | 1956.0 | 156172 |
| 1026 | 312.7 | 10235 | 887117 | 289.8 | 25123 | 1822.8 | 157995 |
| 1027 | 313.0 | 8925 | 896043 | 252.7 | 25375 | 1589.5 | 159585 |
| 1028 | 313.3 | 7329 | 903372 | 207.5 | 25583 | 1305.2 | 160890 |
| 1029 | 313.6 | 6090 | 909463 | 172.4 | 25755 | 1084.6 | 161975 |
| 1030 | 313.9 | 5034 | 914497 | 142.5 | 25898 | 896.5 | 162871 |
| 1031 | 314.2 | 4325 | 918823 | 122.4 | 26021 | 770.2 | 163642 |
| 1032 | 314.5 | 3813 | 922637 | 107.9 | 26129 | 679.0 | 164321 |
| 1033 | 314.8 | 3265 | 925902 | 92.4 | 26221 | 581.4 | 164903 |
| 1034 | 315.1 | 2716 | 928619 | 76.9 | 26298 | 483.7 | 165387 |
| 1035 | 315.4 | 2091 | 930710 | 59.2 | 26357 | 372.4 | 165759 |
| 1036 | 315.7 | 914 | 931624 | 25.8 | 26383 | 162.7 | 165922 |

VOLUME REPORT

| DEPTH feet | DEPTH meters | INCR $ft^3$ | TOTAL $ft^3$ | INCR $m^3$ | TOTAL $m^3$ | INCR bbls | TOTAL bbls |
|---|---|---|---|---|---|---|---|
| 937 | 285.5 | 0 | 0 | 0.0 | 0 | 0.0 | 0 |
| 938 | 285.9 | 124 | 124 | 3.5 | 3 | 22.0 | 22 |
| 939 | 286.2 | 474 | 599 | 13.4 | 16 | 84.4 | 106 |
| 940 | 286.5 | 971 | 1570 | 27.4 | 44 | 172.9 | 279 |
| 942 | 287.1 | 6914 | 8485 | 195.8 | 240 | 1231.3 | 1511 |
| 944 | 287.7 | 10495 | 18980 | 297.2 | 537 | 1869.1 | 3380 |
| 946 | 288.3 | 8044 | 27024 | 227.8 | 765 | 1432.6 | 4812 |
| 948 | 288.9 | 6475 | 33500 | 183.3 | 948 | 1153.1 | 5966 |
| 950 | 289.5 | 4553 | 38053 | 128.9 | 1077 | 810.8 | 6777 |
| 952 | 290.1 | 2742 | 40796 | 77.6 | 1155 | 488.3 | 7265 |
| 954 | 290.7 | 1814 | 42610 | 51.3 | 1206 | 323.0 | 7588 |
| 956 | 291.3 | 1447 | 44057 | 40.9 | 1247 | 257.7 | 7846 |
| 958 | 291.9 | 7658 | 51716 | 216.8 | 1464 | 1363.8 | 9210 |
| 960 | 292.6 | 21549 | 73266 | 610.2 | 2074 | 3837.8 | 13048 |
| 962 | 293.2 | 26088 | 99355 | 738.8 | 2813 | 4646.2 | 17695 |
| 964 | 293.8 | 24061 | 123416 | 681.4 | 3495 | 4285.2 | 21980 |
| 966 | 294.4 | 22494 | 145911 | 637.0 | 4132 | 4006.1 | 25986 |
| 968 | 295.0 | 22277 | 168188 | 630.8 | 4763 | 3967.5 | 29954 |
| 970 | 295.6 | 22723 | 190912 | 643.5 | 5406 | 4046.9 | 34001 |
| 972 | 296.2 | 22388 | 213300 | 634.0 | 6040 | 3987.3 | 37988 |
| 974 | 296.8 | 20882 | 234183 | 591.3 | 6632 | 3719.0 | 41707 |
| 976 | 297.4 | 21246 | 255430 | 601.6 | 7233 | 3783.9 | 45492 |
| 978 | 298.0 | 23705 | 279135 | 671.3 | 7905 | 4221.8 | 49713 |
| 980 | 298.7 | 25450 | 304586 | 720.7 | 8625 | 4532.6 | 54246 |
| 982 | 299.3 | 27015 | 331601 | 765.0 | 9390 | 4811.3 | 59058 |
| 984 | 299.9 | 27626 | 359227 | 782.3 | 10173 | 4920.1 | 63978 |
| 986 | 300.5 | 27444 | 386672 | 777.2 | 10950 | 4887.7 | 68866 |
| 988 | 301.1 | 27085 | 413757 | 767.0 | 11717 | 4823.8 | 73690 |
| 990 | 301.7 | 26475 | 440233 | 749.7 | 12467 | 4715.1 | 78405 |
| 992 | 302.3 | 25353 | 465586 | 717.9 | 13185 | 4515.3 | 82920 |
| 994 | 302.9 | 25407 | 490993 | 719.5 | 13904 | 4524.9 | 87445 |
| 996 | 303.5 | 27756 | 518750 | 786.0 | 14691 | 4943.3 | 92389 |
| 998 | 304.1 | 29707 | 548457 | 841.3 | 15532 | 5290.8 | 97680 |
| 1000 | 304.8 | 29535 | 577992 | 836.4 | 16368 | 5260.1 | 102940 |
| 1002 | 305.4 | 28450 | 606443 | 805.7 | 17174 | 5066.9 | 108007 |
| 1004 | 306.0 | 27774 | 634217 | 786.5 | 17961 | 4946.5 | 112954 |
| 1006 | 306.6 | 27358 | 661576 | 774.7 | 18735 | 4872.4 | 117826 |
| 1008 | 307.2 | 26132 | 687709 | 740.0 | 19475 | 4654.1 | 122480 |
| 1010 | 307.8 | 24598 | 712307 | 696.6 | 20172 | 4380.9 | 126861 |
| 1014 | 309.0 | 50097 | 762405 | 1418.7 | 21591 | 8922.2 | 135784 |
| 1016 | 309.6 | 25031 | 787437 | 708.8 | 22300 | 4458.0 | 140242 |
| 1018 | 310.2 | 22560 | 809998 | 638.8 | 22939 | 4017.9 | 144260 |
| 1020 | 310.8 | 19911 | 829910 | 563.8 | 23503 | 3546.1 | 147806 |
| 1022 | 311.5 | 17279 | 847189 | 489.3 | 23992 | 3077.3 | 150884 |
| 1024 | 312.1 | 18709 | 865899 | 529.8 | 24522 | 3332.0 | 154216 |
| 1026 | 312.7 | 21218 | 887117 | 600.8 | 25123 | 3778.9 | 157995 |
| 1028 | 313.3 | 16254 | 903372 | 460.3 | 25583 | 2894.8 | 160890 |
| 1030 | 313.9 | 11125 | 914497 | 315.0 | 25898 | 1981.3 | 162871 |
| 1032 | 314.5 | 8139 | 922637 | 230.4 | 26129 | 1449.5 | 164321 |
| 1034 | 315.1 | 5981 | 928619 | 169.3 | 26298 | 1065.2 | 165387 |
| 1035 | 315.4 | 2091 | 930710 | 59.2 | 26357 | 372.4 | 165759 |
| 1036 | 315.7 | 914 | 931624 | 25.8 | 26383 | 162.7 | 165922 |

MAJOR COMPASS RADII

Depth & Radii in feet

| DEPTH | TILT | N | NE | E | SE | S | SW | W | NW |
|---|---|---|---|---|---|---|---|---|---|
| 937 | 90 | .6 | .9 | .6 | .6 | .9 | 1.4 | .7 | .6 |
| 938 | 90 | 7.8 | 7.5 | 8.7 | 10.4 | 14.9 | 11.0 | 11.1 | 10.5 |
| 939 | 90 | 15.6 | 15.0 | 9.7 | 13.8 | 15.2 | 14.6 | 14.9 | 14.6 |
| 940 | 90 | 21.9 | 15.3 | 11.9 | 22.5 | 23.1 | 22.2 | 23.0 | 21.8 |
| 942 | 90 | 44.4 | 42.9 | 37.1 | 44.3 | 44.5 | 46.3 | 45.2 | 45.5 |
| 944 | 90 | 33.5 | 36.8 | 33.3 | 39.0 | 40.0 | 33.6 | 42.6 | 39.6 |
| 946 | 90 | 31.8 | 34.1 | 33.4 | 32.2 | 35.4 | 30.8 | 39.5 | 35.8 |
| 948 | 90 | 25.8 | 31.5 | 27.6 | 29.5 | 32.4 | 26.1 | 36.7 | 33.5 |
| 950 | 90 | 22.0 | 26.8 | 22.7 | 22.0 | 28.7 | 19.4 | 23.4 | 21.0 |
| 952 | 90 | 18.8 | 22.0 | 16.4 | 14.3 | 23.0 | 14.1 | 16.9 | 18.0 |
| 954 | 90 | 16.0 | 19.2 | 15.3 | 11.4 | 20.1 | 12.1 | 14.3 | 16.6 |
| 956 | 90 | 15.6 | 17.2 | 11.2 | 8.3 | 19.7 | 10.2 | 13.4 | 15.3 |
| 958 | 90 | 56.9 | 28.6 | 21.8 | 46.3 | 73.0 | 66.6 | 66.1 | 59.6 |
| 960 | 90 | 60.3 | 63.5 | 55.5 | 70.3 | 73.2 | 68.9 | 67.0 | 63.5 |
| 962 | 90 | 61.5 | 64.7 | 61.0 | 68.6 | 60.2 | 62.5 | 66.4 | 61.8 |
| 964 | 90 | 53.5 | 62.7 | 53.3 | 66.5 | 59.8 | 60.2 | 60.9 | 56.7 |
| 966 | 90 | 46.5 | 59.8 | 55.6 | 65.6 | 58.6 | 60.1 | 63.4 | 55.7 |
| 968 | 90 | 44.5 | 64.1 | 55.6 | 65.2 | 55.9 | 62.5 | 63.4 | 59.9 |
| 970 | 90 | 41.1 | 65.3 | 65.2 | 65.1 | 57.9 | 64.7 | 65.7 | 52.4 |
| 972 | 90 | 40.9 | 65.0 | 63.6 | 64.4 | 60.5 | 65.6 | 64.4 | 42.9 |
| 974 | 90 | 39.1 | 65.4 | 63.5 | 59.4 | 53.3 | 61.4 | 61.2 | 39.2 |
| 976 | 90 | 63.6 | 64.2 | 61.8 | 56.9 | 56.3 | 60.0 | 59.4 | 67.3 |
| 978 | 90 | 66.5 | 63.7 | 62.0 | 58.7 | 61.3 | 61.2 | 64.0 | 68.1 |
| 980 | 90 | 67.3 | 63.7 | 62.2 | 63.0 | 64.3 | 62.2 | 66.3 | 68.1 |
| 982 | 90 | 68.0 | 66.4 | 65.5 | 65.7 | 64.7 | 64.9 | 66.7 | 69.1 |
| 984 | 90 | 68.1 | 70.8 | 65.1 | 66.0 | 64.3 | 64.8 | 67.1 | 69.7 |
| 986 | 90 | 69.2 | 70.7 | 65.4 | 65.0 | 62.8 | 65.0 | 64.7 | 67.5 |
| 988 | 90 | 68.2 | 69.7 | 66.6 | 63.1 | 61.1 | 64.1 | 63.9 | 65.0 |
| 990 | 90 | 65.1 | 70.4 | 68.3 | 60.3 | 57.0 | 67.3 | 62.1 | 62.5 |
| 992 | 90 | 67.4 | 69.3 | 65.3 | 58.2 | 55.0 | 65.7 | 58.0 | 60.3 |
| 994 | 90 | 70.8 | 69.8 | 68.1 | 61.6 | 53.4 | 65.9 | 58.7 | 60.2 |
| 996 | 90 | 71.0 | 72.4 | 70.8 | 69.8 | 72.3 | 68.5 | 65.0 | 59.7 |
| 998 | 90 | 70.7 | 72.2 | 70.8 | 71.2 | 72.4 | 69.6 | 68.0 | 58.9 |
| 1000 | 90 | 68.9 | 72.7 | 70.6 | 71.5 | 71.5 | 68.7 | 68.1 | 58.7 |
| 1002 | 90 | 67.7 | 69.5 | 70.2 | 69.9 | 70.5 | 67.7 | 64.8 | 56.8 |
| 1004 | 90 | 63.8 | 69.3 | 69.6 | 71.2 | 69.3 | 68.0 | 67.0 | 56.5 |
| 1006 | 90 | 60.3 | 69.1 | 69.5 | 69.9 | 66.6 | 69.8 | 66.0 | 55.4 |
| 1008 | 90 | 56.9 | 68.3 | 67.7 | 69.5 | 64.1 | 69.3 | 64.1 | 53.0 |
| 1010 | 90 | 49.1 | 67.5 | 63.9 | 63.0 | 64.4 | 65.4 | 63.3 | 52.0 |
| 1014 | 90 | 46.4 | 62.4 | 64.8 | 71.5 | 71.9 | 65.1 | 60.5 | 56.2 |
| 1016 | 90 | 42.1 | 59.9 | 64.4 | 67.0 | 67.1 | 63.4 | 57.9 | 54.7 |
| 1018 | 90 | 34.1 | 56.8 | 59.8 | 64.7 | 66.0 | 61.3 | 55.7 | 51.0 |
| 1020 | 90 | 34.0 | 54.6 | 58.0 | 57.6 | 60.9 | 58.0 | 51.5 | 42.7 |
| 1022 | 90 | 27.3 | 51.1 | 54.0 | 55.1 | 57.0 | 53.7 | 50.1 | 39.6 |
| 1024 | 90 | 93.2 | 44.9 | 50.4 | 51.2 | 53.1 | 52.0 | 45.4 | 95.4 |
| 1026 | 90 | 93.9 | 44.9 | 46.3 | 47.8 | 49.3 | 49.1 | 41.8 | 94.0 |
| 1028 | 90 | 32.8 | 35.1 | 43.5 | 44.6 | 46.5 | 46.1 | 38.1 | 32.7 |
| 1030 | 90 | 35.3 | 33.3 | 37.9 | 41.2 | 42.3 | 41.6 | 36.2 | 27.9 |
| 1032 | 90 | 30.9 | 31.2 | 35.3 | 35.8 | 38.0 | 35.9 | 31.2 | 24.4 |
| 1034 | 90 | 26.3 | 24.0 | 28.3 | 30.9 | 33.9 | 35.4 | 26.4 | 20.6 |

MAJOR COMPASS RADII

Depth & Radii in feet

| DEPTH | TILT | N | NE | E | SE | S | SW | W | NW |
|---|---|---|---|---|---|---|---|---|---|
| 1035 | 90 | 22.4 | 16.2 | 25.8 | 27.9 | 18.7 | 30.1 | 27.6 | 17.3 |
| 1036 | 90 | 12.6 | 4.8 | 9.1 | 7.2 | 6.8 | 6.1 | 11.9 | 12.0 |

5 DEGREE RADII REPORT

Radii in feet

| AZ | DEPTH: 937 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | .6 | .9 | .8 | .8 | .8 | .9 | .9 | .8 | .9 |
| 45 | .9 | .9 | .9 | .9 | .6 | .7 | .6 | .6 | .6 |
| 90 | .6 | .7 | .7 | .6 | .6 | .6 | .7 | .7 | .7 |
| 135 | .6 | .6 | .9 | .9 | .9 | .9 | .9 | .9 | .9 |
| 180 | .9 | 1.0 | .9 | .9 | .9 | 1.2 | 1.3 | 1.3 | 1.3 |
| 225 | 1.4 | 1.5 | 1.3 | 1.3 | .9 | 1.0 | .9 | .7 | .6 |
| 270 | .7 | .7 | .7 | .7 | .7 | .6 | .6 | .6 | .6 |
| 315 | .6 | .6 | .7 | .6 | .6 | .6 | .6 | .6 | .6 |

| AZ | DEPTH: 938 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 7.8 | 7.9 | 7.2 | 6.7 | 6.0 | 6.6 | 7.7 | 8.0 | 8.1 |
| 45 | 7.5 | 7.5 | 10.0 | 10.3 | 12.3 | 8.7 | 8.1 | 5.2 | 6.9 |
| 90 | 8.7 | 9.8 | 9.5 | 9.6 | 9.4 | 9.7 | 10.5 | 10.2 | 10.7 |
| 135 | 10.4 | 10.9 | 10.3 | 9.3 | 11.6 | 13.8 | 13.6 | 12.9 | 12.8 |
| 180 | 14.9 | 14.3 | 13.6 | 14.9 | 14.4 | 13.0 | 10.8 | 10.9 | 11.0 |
| 225 | 11.0 | 10.3 | 10.0 | 11.6 | 9.7 | 11.8 | 10.4 | 11.3 | 10.8 |
| 270 | 11.1 | 11.3 | 12.1 | 10.1 | 8.9 | 9.4 | 10.7 | 12.0 | 9.9 |
| 315 | 10.5 | 11.2 | 11.3 | 10.4 | 10.2 | 8.1 | 8.2 | 8.4 | 8.1 |

| AZ | DEPTH: 939 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 15.6 | 15.6 | 15.6 | 12.7 | 15.0 | 14.9 | 14.9 | 15.3 | 15.6 |
| 45 | 15.0 | 13.8 | 13.1 | 13.6 | 9.6 | 9.1 | 8.7 | 8.5 | 9.1 |
| 90 | 9.7 | 9.1 | 8.1 | 7.8 | 8.3 | 12.3 | 9.8 | 12.3 | 13.2 |
| 135 | 13.8 | 13.5 | 15.1 | 15.0 | 14.9 | 14.9 | 14.9 | 14.9 | 15.2 |
| 180 | 15.2 | 14.7 | 15.4 | 14.5 | 15.1 | 13.9 | 15.0 | 15.1 | 14.9 |
| 225 | 14.6 | 14.9 | 15.2 | 15.2 | 15.1 | 15.5 | 15.1 | 15.1 | 14.7 |
| 270 | 14.9 | 15.0 | 15.3 | 15.0 | 15.1 | 15.2 | 14.8 | 14.2 | 13.9 |
| 315 | 14.6 | 15.0 | 15.1 | 15.3 | 15.6 | 15.9 | 15.9 | 15.9 | 15.9 |

| AZ | DEPTH: 940 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 21.9 | 21.6 | 21.2 | 21.2 | 19.8 | 22.2 | 22.4 | 22.1 | 25.3 |
| 45 | 15.3 | 14.3 | 13.9 | 15.8 | 14.0 | 10.5 | 11.3 | 11.7 | 11.6 |
| 90 | 11.9 | 11.2 | 12.6 | 13.4 | 16.6 | 18.8 | 19.0 | 19.9 | 18.5 |
| 135 | 22.5 | 23.9 | 22.4 | 21.3 | 23.4 | 23.7 | 21.5 | 22.2 | 22.8 |
| 180 | 23.1 | 22.7 | 22.1 | 22.9 | 22.0 | 22.0 | 21.8 | 21.7 | 22.1 |
| 225 | 22.2 | 22.5 | 22.7 | 23.1 | 22.9 | 23.0 | 23.0 | 22.8 | 23.1 |
| 270 | 23.0 | 22.8 | 22.7 | 22.3 | 23.2 | 22.8 | 22.9 | 22.6 | 22.4 |
| 315 | 21.8 | 22.4 | 22.6 | 22.2 | 21.6 | 22.6 | 21.6 | 21.5 | 20.9 |

| AZ | DEPTH: 942 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 44.4 | 44.2 | 44.4 | 43.9 | 44.9 | 45.2 | 45.4 | 45.2 | 42.7 |
| 45 | 42.9 | 42.6 | 40.8 | 39.3 | 39.0 | 38.8 | 38.4 | 38.0 | 37.6 |
| 90 | 37.1 | 37.7 | 38.0 | 39.3 | 40.7 | 41.2 | 41.5 | 43.1 | 44.5 |
| 135 | 44.3 | 45.2 | 47.1 | 46.2 | 44.3 | 44.3 | 45.5 | 45.0 | 45.2 |
| 180 | 44.5 | 43.8 | 44.4 | 45.4 | 44.0 | 44.6 | 46.3 | 44.4 | 45.9 |
| 225 | 46.3 | 46.7 | 46.5 | 47.8 | 47.3 | 46.2 | 45.2 | 44.9 | 45.5 |
| 270 | 45.2 | 45.6 | 46.8 | 47.5 | 47.8 | 46.8 | 46.9 | 44.1 | 46.1 |
| 315 | 45.5 | 45.6 | 45.2 | 45.7 | 44.9 | 45.1 | 45.5 | 45.5 | 44.9 |

# 5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 944 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 33.5 | 32.8 | 34.2 | 35.3 | 38.4 | 38.0 | 38.7 | 38.0 | 37.9 |
| 45 | 36.8 | 36.7 | 37.5 | 38.0 | 37.4 | 37.3 | 36.8 | 34.8 | 34.5 |
| 90 | 33.3 | 32.6 | 32.2 | 31.5 | 32.2 | 34.3 | 33.5 | 32.5 | 34.7 |
| 135 | 39.0 | 41.4 | 42.6 | 38.0 | 41.0 | 39.8 | 40.2 | 38.7 | 39.4 |
| 180 | 40.0 | 39.1 | 39.2 | 40.3 | 40.8 | 34.7 | 34.3 | 36.0 | 34.1 |
| 225 | 33.6 | 42.0 | 37.1 | 37.7 | 35.6 | 40.1 | 37.7 | 38.0 | 41.3 |
| 270 | 42.6 | 41.5 | 42.7 | 43.2 | 44.0 | 41.9 | 42.9 | 39.5 | 42.2 |
| 315 | 39.6 | 32.7 | 33.5 | 34.0 | 34.5 | 33.5 | 34.6 | 34.8 | 33.9 |

AZ DEPTH: 946 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 31.8 | 31.9 | 33.2 | 33.5 | 33.9 | 34.8 | 35.8 | 35.4 | 35.1 |
| 45 | 34.1 | 34.6 | 35.1 | 35.5 | 34.5 | 35.1 | 34.4 | 33.2 | 33.8 |
| 90 | 33.4 | 31.2 | 29.9 | 28.8 | 29.1 | 27.9 | 28.4 | 28.0 | 31.2 |
| 135 | 32.2 | 33.1 | 35.5 | 35.8 | 36.4 | 37.4 | 37.2 | 36.5 | 35.4 |
| 180 | 35.4 | 35.1 | 34.1 | 34.2 | 33.5 | 32.8 | 32.3 | 32.1 | 31.2 |
| 225 | 30.8 | 30.9 | 32.2 | 33.3 | 33.8 | 33.5 | 34.8 | 33.6 | 37.4 |
| 270 | 39.5 | 39.5 | 39.4 | 39.4 | 37.4 | 37.4 | 37.3 | 37.2 | 36.6 |
| 315 | 35.8 | 33.5 | 32.4 | 31.8 | 31.8 | 31.2 | 30.6 | 30.4 | 31.4 |

AZ DEPTH: 948 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 25.8 | 27.3 | 29.6 | 30.2 | 30.4 | 30.8 | 31.7 | 31.7 | 31.9 |
| 45 | 31.5 | 31.0 | 30.7 | 30.9 | 30.8 | 30.6 | 30.6 | 30.2 | 29.1 |
| 90 | 27.6 | 27.6 | 25.7 | 24.5 | 23.7 | 23.4 | 23.7 | 25.0 | 27.6 |
| 135 | 29.5 | 30.8 | 31.3 | 31.9 | 33.8 | 33.1 | 32.4 | 31.5 | 32.0 |
| 180 | 32.4 | 31.9 | 31.7 | 30.6 | 29.6 | 28.6 | 28.4 | 27.6 | 26.6 |
| 225 | 26.1 | 26.5 | 25.9 | 26.1 | 28.3 | 29.2 | 31.5 | 32.9 | 34.9 |
| 270 | 36.7 | 37.0 | 37.4 | 36.0 | 35.2 | 34.2 | 33.1 | 33.5 | 33.6 |
| 315 | 33.5 | 30.6 | 27.9 | 26.6 | 27.0 | 25.5 | 24.5 | 24.7 | 25.6 |

AZ DEPTH: 950 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 22.0 | 22.3 | 22.7 | 23.1 | 24.7 | 26.0 | 26.6 | 27.8 | 27.4 |
| 45 | 26.8 | 26.3 | 26.3 | 26.1 | 25.7 | 26.0 | 24.4 | 23.3 | 23.9 |
| 90 | 22.7 | 21.3 | 19.8 | 18.9 | 18.8 | 19.4 | 19.5 | 20.1 | 21.1 |
| 135 | 22.0 | 22.6 | 22.8 | 22.7 | 21.7 | 23.9 | 27.0 | 27.4 | 27.9 |
| 180 | 28.7 | 28.0 | 27.9 | 27.1 | 25.2 | 23.2 | 21.2 | 19.9 | 19.5 |
| 225 | 19.4 | 19.4 | 19.4 | 19.2 | 19.8 | 20.3 | 20.7 | 23.3 | 20.4 |
| 270 | 23.4 | 28.7 | 29.2 | 29.5 | 25.8 | 26.0 | 25.2 | 23.8 | 24.3 |
| 315 | 21.0 | 21.5 | 21.1 | 20.5 | 21.2 | 21.1 | 21.1 | 21.4 | 21.9 |

AZ DEPTH: 952 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 18.8 | 18.6 | 18.5 | 18.8 | 19.4 | 20.5 | 21.4 | 21.8 | 22.1 |
| 45 | 22.0 | 21.4 | 21.2 | 20.5 | 20.8 | 20.5 | 19.8 | 19.1 | 17.1 |
| 90 | 16.4 | 15.4 | 14.6 | 13.9 | 13.7 | 13.6 | 14.0 | 13.8 | 13.7 |
| 135 | 14.3 | 15.1 | 15.9 | 16.9 | 18.2 | 19.5 | 20.9 | 22.2 | 22.5 |
| 180 | 23.0 | 22.7 | 22.3 | 20.6 | 17.9 | 15.7 | 14.8 | 14.2 | 14.3 |
| 225 | 14.1 | 14.4 | 14.7 | 14.9 | 14.9 | 14.9 | 15.3 | 15.4 | 15.9 |
| 270 | 16.9 | 17.5 | 18.3 | 18.7 | 19.5 | 19.4 | 19.2 | 18.8 | 17.9 |
| 315 | 18.0 | 17.1 | 17.0 | 17.6 | 17.8 | 17.9 | 17.8 | 18.1 | 18.5 |

# 5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 954 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 16.0 | 16.3 | 16.2 | 16.3 | 16.6 | 16.9 | 17.4 | 17.9 | 18.5 |
| 45 | 19.2 | 19.5 | 19.4 | 18.8 | 18.1 | 18.0 | 18.0 | 17.6 | 16.5 |
| 90 | 15.3 | 14.3 | 13.4 | 12.3 | 11.5 | 10.9 | 10.1 | 9.6 | 10.8 |
| 135 | 11.4 | 12.0 | 12.9 | 14.0 | 15.3 | 17.5 | 18.7 | 19.2 | 19.5 |
| 180 | 20.1 | 20.1 | 20.0 | 19.8 | 18.1 | 16.6 | 14.3 | 13.0 | 12.0 |
| 225 | 12.1 | 12.2 | 11.9 | 12.1 | 12.6 | 12.8 | 12.8 | 13.2 | 13.2 |
| 270 | 14.3 | 15.3 | 16.2 | 16.9 | 17.6 | 17.8 | 17.3 | 17.4 | 17.7 |
| 315 | 16.6 | 15.3 | 15.1 | 14.8 | 15.1 | 15.7 | 16.0 | 16.0 | 15.9 |

AZ DEPTH: 956 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 15.6 | 16.0 | 15.5 | 15.9 | 16.4 | 15.0 | 14.8 | 16.2 | 18.2 |
| 45 | 17.2 | 17.1 | 17.5 | 17.8 | 17.5 | 17.1 | 16.6 | 15.0 | 13.0 |
| 90 | 11.2 | 10.7 | 10.0 | 9.4 | 9.4 | 8.7 | 8.4 | 8.2 | 8.2 |
| 135 | 8.3 | 9.4 | 10.3 | 10.8 | 11.2 | 12.6 | 17.5 | 20.0 | 19.9 |
| 180 | 19.7 | 20.2 | 18.1 | 14.8 | 13.1 | 11.4 | 10.8 | 10.4 | 10.4 |
| 225 | 10.2 | 10.1 | 10.3 | 10.4 | 11.0 | 11.0 | 12.5 | 13.6 | 13.6 |
| 270 | 13.4 | 15.1 | 17.4 | 17.3 | 17.5 | 17.5 | 17.5 | 16.9 | 16.8 |
| 315 | 15.3 | 14.9 | 14.6 | 14.9 | 14.6 | 14.7 | 14.9 | 14.9 | 15.6 |

AZ DEPTH: 958 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 56.9 | 24.8 | 23.2 | 30.9 | 25.3 | 26.1 | 23.9 | 25.2 | 26.3 |
| 45 | 28.6 | 24.3 | 25.4 | 26.0 | 24.0 | 22.9 | 23.0 | 23.5 | 26.0 |
| 90 | 21.8 | 23.4 | 22.9 | 24.6 | 22.7 | 24.0 | 23.4 | 23.2 | 24.3 |
| 135 | 46.3 | 70.0 | 69.6 | 69.9 | 70.4 | 69.9 | 70.9 | 71.2 | 71.5 |
| 180 | 73.0 | 71.8 | 71.6 | 70.0 | 69.9 | 70.8 | 31.2 | 50.0 | 31.5 |
| 225 | 66.6 | 64.7 | 64.5 | 64.7 | 37.9 | 33.9 | 67.3 | 66.8 | 68.9 |
| 270 | 66.1 | 63.7 | 63.8 | 65.3 | 65.4 | 64.1 | 65.4 | 64.5 | 60.5 |
| 315 | 59.6 | 60.3 | 58.9 | 58.8 | 60.6 | 58.6 | 57.4 | 57.2 | 57.5 |

AZ DEPTH: 960 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 60.3 | 63.6 | 63.3 | 62.9 | 61.2 | 62.1 | 64.1 | 64.0 | 62.1 |
| 45 | 63.5 | 61.6 | 61.2 | 61.5 | 60.8 | 60.5 | 61.0 | 58.5 | 56.0 |
| 90 | 55.5 | 57.6 | 60.8 | 60.5 | 64.5 | 66.7 | 67.9 | 70.1 | 70.6 |
| 135 | 70.3 | 69.5 | 69.0 | 69.2 | 70.1 | 70.5 | 69.2 | 71.2 | 72.6 |
| 180 | 73.2 | 72.6 | 72.3 | 72.5 | 72.5 | 72.4 | 70.3 | 70.9 | 69.2 |
| 225 | 68.9 | 64.6 | 64.1 | 65.4 | 67.1 | 66.8 | 67.4 | 67.7 | 68.0 |
| 270 | 67.0 | 66.6 | 66.2 | 66.3 | 67.0 | 67.6 | 66.2 | 66.7 | 64.6 |
| 315 | 63.5 | 64.4 | 63.0 | 64.4 | 61.8 | 62.7 | 57.9 | 59.1 | 59.0 |

AZ DEPTH: 962 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 61.5 | 64.5 | 64.8 | 63.6 | 62.8 | 64.1 | 66.2 | 65.3 | 64.2 |
| 45 | 64.7 | 62.9 | 62.5 | 63.4 | 62.7 | 62.1 | 55.9 | 54.2 | 57.4 |
| 90 | 61.0 | 61.8 | 63.8 | 66.7 | 67.3 | 69.7 | 69.5 | 69.6 | 69.6 |
| 135 | 68.6 | 67.4 | 63.8 | 67.7 | 67.4 | 65.4 | 61.5 | 56.9 | 58.9 |
| 180 | 60.2 | 63.1 | 63.2 | 61.8 | 59.8 | 60.3 | 58.9 | 59.8 | 63.1 |
| 225 | 62.5 | 60.2 | 62.2 | 67.3 | 63.0 | 65.4 | 62.6 | 65.7 | 66.3 |
| 270 | 66.4 | 65.4 | 67.9 | 68.7 | 68.0 | 65.4 | 65.3 | 61.3 | 60.8 |
| 315 | 61.8 | 60.2 | 62.6 | 54.4 | 56.9 | 56.6 | 56.9 | 54.6 | 61.7 |

# 5 DEGREE RADII REPORT

Radii in feet

| AZ | DEPTH: 964 ft | | | TILT: 90 degrees | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 53.5 | 60.7 | 60.5 | 63.3 | 63.0 | 65.4 | 66.5 | 64.9 | 63.0 |
| 45 | 62.7 | 62.8 | 62.8 | 63.1 | 63.3 | 64.1 | 62.5 | 54.9 | 52.1 |
| 90 | 53.3 | 60.1 | 60.9 | 62.7 | 65.0 | 64.0 | 66.7 | 65.9 | 68.0 |
| 135 | 66.5 | 66.1 | 64.3 | 64.1 | 64.9 | 64.5 | 60.3 | 56.7 | 56.6 |
| 180 | 59.8 | 60.6 | 62.2 | 60.9 | 59.2 | 57.3 | 56.9 | 58.4 | 60.4 |
| 225 | 60.2 | 59.2 | 58.9 | 58.5 | 59.7 | 59.9 | 60.8 | 61.0 | 59.3 |
| 270 | 60.9 | 61.5 | 62.2 | 62.8 | 65.6 | 62.5 | 61.7 | 59.2 | 57.7 |
| 315 | 56.7 | 56.9 | 55.1 | 51.1 | 49.7 | 51.3 | 51.9 | 51.1 | 51.5 |

| AZ | DEPTH: 966 ft | | | TILT: 90 degrees | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 46.5 | 53.5 | 59.1 | 59.5 | 61.2 | 58.7 | 64.1 | 63.3 | 59.3 |
| 45 | 59.8 | 59.4 | 60.1 | 59.6 | 61.2 | 63.5 | 55.6 | 53.0 | 52.4 |
| 90 | 55.6 | 61.5 | 60.0 | 61.5 | 60.9 | 64.3 | 65.0 | 65.4 | 65.4 |
| 135 | 65.6 | 65.4 | 64.8 | 64.9 | 64.1 | 59.5 | 55.0 | 54.0 | 56.3 |
| 180 | 58.6 | 60.2 | 62.7 | 62.5 | 60.8 | 59.8 | 57.0 | 57.8 | 58.9 |
| 225 | 60.1 | 61.5 | 61.5 | 60.8 | 62.8 | 61.3 | 60.8 | 60.7 | 61.5 |
| 270 | 63.4 | 62.5 | 62.5 | 64.4 | 62.6 | 60.5 | 61.2 | 56.4 | 55.7 |
| 315 | 55.7 | 47.6 | 47.8 | 47.6 | 48.3 | 50.3 | 50.1 | 45.6 | 45.7 |

| AZ | DEPTH: 968 ft | | | TILT: 90 degrees | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 44.5 | 50.3 | 51.9 | 55.9 | 56.4 | 56.7 | 57.2 | 56.7 | 60.5 |
| 45 | 64.1 | 62.1 | 61.5 | 61.1 | 60.7 | 61.0 | 60.3 | 59.1 | 56.9 |
| 90 | 55.6 | 55.0 | 64.4 | 63.4 | 63.7 | 64.0 | 64.6 | 65.1 | 65.4 |
| 135 | 65.2 | 65.4 | 65.5 | 65.2 | 65.1 | 63.5 | 53.4 | 51.9 | 52.7 |
| 180 | 55.9 | 59.2 | 62.5 | 63.8 | 62.8 | 62.6 | 61.4 | 59.8 | 60.8 |
| 225 | 62.5 | 62.8 | 63.6 | 64.5 | 65.1 | 65.2 | 65.1 | 65.0 | 63.8 |
| 270 | 63.4 | 64.8 | 65.8 | 64.0 | 63.9 | 65.4 | 65.1 | 61.5 | 62.1 |
| 315 | 59.9 | 57.3 | 49.5 | 46.0 | 45.6 | 45.8 | 46.1 | 46.2 | 43.8 |

| AZ | DEPTH: 970 ft | | | TILT: 90 degrees | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 41.1 | 47.7 | 51.9 | 54.0 | 55.3 | 54.2 | 55.6 | 54.4 | 64.7 |
| 45 | 65.3 | 64.7 | 63.7 | 66.0 | 63.1 | 63.5 | 64.3 | 63.6 | 64.3 |
| 90 | 65.2 | 66.0 | 65.6 | 64.1 | 65.6 | 66.3 | 65.7 | 65.2 | 65.2 |
| 135 | 65.1 | 65.3 | 64.9 | 65.4 | 63.6 | 51.4 | 48.8 | 50.5 | 53.1 |
| 180 | 57.9 | 60.4 | 63.9 | 64.4 | 63.9 | 63.1 | 62.1 | 61.0 | 63.4 |
| 225 | 64.7 | 65.1 | 66.0 | 67.7 | 67.8 | 66.8 | 65.5 | 65.2 | 64.7 |
| 270 | 65.7 | 65.5 | 64.5 | 66.4 | 66.6 | 63.4 | 62.3 | 63.3 | 61.7 |
| 315 | 52.4 | 45.0 | 44.0 | 43.5 | 44.0 | 42.8 | 42.4 | 41.3 | 41.3 |

| AZ | DEPTH: 972 ft | | | TILT: 90 degrees | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 40.9 | 44.2 | 51.3 | 51.9 | 52.0 | 52.4 | 53.0 | 65.5 | 65.7 |
| 45 | 65.0 | 65.5 | 65.6 | 66.2 | 66.7 | 65.5 | 67.0 | 66.0 | 65.4 |
| 90 | 63.6 | 64.3 | 64.3 | 65.2 | 66.0 | 65.8 | 63.5 | 63.8 | 64.1 |
| 135 | 64.4 | 60.4 | 60.2 | 58.5 | 50.1 | 46.7 | 45.7 | 44.2 | 46.6 |
| 180 | 60.5 | 63.0 | 63.5 | 62.0 | 60.7 | 61.7 | 61.4 | 63.6 | 65.0 |
| 225 | 65.6 | 67.2 | 67.4 | 67.0 | 66.8 | 65.7 | 66.0 | 63.8 | 64.9 |
| 270 | 64.4 | 62.8 | 64.7 | 63.5 | 60.2 | 63.7 | 64.5 | 54.2 | 42.3 |
| 315 | 42.9 | 42.3 | 41.8 | 40.8 | 40.5 | 39.7 | 39.0 | 39.0 | 40.4 |

# 5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 974 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 39.1 | 39.3 | 45.1 | 49.4 | 49.0 | 48.8 | 49.5 | 57.2 | 65.8 |
| 45 | 65.4 | 65.6 | 64.9 | 64.1 | 64.1 | 67.7 | 67.1 | 65.6 | 64.5 |
| 90 | 63.5 | 63.1 | 62.8 | 59.6 | 62.8 | 60.2 | 60.2 | 60.9 | 60.5 |
| 135 | 59.4 | 60.2 | 58.5 | 55.9 | 47.2 | 43.7 | 40.0 | 42.0 | 45.5 |
| 180 | 53.3 | 60.2 | 61.4 | 57.5 | 56.2 | 56.5 | 60.2 | 61.2 | 61.3 |
| 225 | 61.4 | 61.5 | 64.6 | 64.1 | 62.8 | 62.1 | 65.6 | 62.0 | 61.0 |
| 270 | 61.2 | 60.9 | 58.8 | 61.9 | 54.8 | 53.3 | 64.0 | 54.1 | 40.4 |
| 315 | 39.2 | 39.7 | 39.7 | 38.3 | 38.7 | 38.8 | 35.9 | 35.4 | 38.0 |

AZ DEPTH: 976 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 63.6 | 60.2 | 57.0 | 61.5 | 63.5 | 62.1 | 59.2 | 59.1 | 59.6 |
| 45 | 64.2 | 64.1 | 64.0 | 64.5 | 62.1 | 62.6 | 61.8 | 61.2 | 62.0 |
| 90 | 61.8 | 61.0 | 57.6 | 57.4 | 56.7 | 55.4 | 56.3 | 56.9 | 58.0 |
| 135 | 56.9 | 57.0 | 56.6 | 56.1 | 55.3 | 56.1 | 56.8 | 57.6 | 55.9 |
| 180 | 56.3 | 59.4 | 56.6 | 57.3 | 54.2 | 57.0 | 58.0 | 57.2 | 59.0 |
| 225 | 60.0 | 60.9 | 60.7 | 60.0 | 60.1 | 60.1 | 58.5 | 59.1 | 59.1 |
| 270 | 59.4 | 60.2 | 58.5 | 59.2 | 60.5 | 61.2 | 61.6 | 62.9 | 67.7 |
| 315 | 67.3 | 66.8 | 67.3 | 66.4 | 65.3 | 66.3 | 65.7 | 65.0 | 64.3 |

AZ DEPTH: 978 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 66.5 | 66.4 | 66.4 | 64.2 | 63.4 | 62.7 | 62.3 | 61.5 | 63.3 |
| 45 | 63.7 | 63.8 | 63.5 | 61.7 | 60.8 | 61.5 | 61.3 | 62.1 | 61.2 |
| 90 | 62.0 | 59.9 | 61.2 | 56.9 | 55.6 | 55.6 | 58.8 | 59.4 | 60.0 |
| 135 | 58.7 | 59.2 | 57.7 | 58.2 | 59.7 | 61.2 | 61.6 | 61.3 | 61.5 |
| 180 | 61.3 | 61.6 | 61.7 | 60.5 | 58.9 | 60.3 | 59.7 | 57.9 | 58.8 |
| 225 | 61.2 | 62.2 | 60.2 | 60.5 | 62.1 | 61.5 | 58.9 | 59.9 | 62.1 |
| 270 | 64.0 | 64.4 | 66.0 | 63.6 | 62.8 | 65.4 | 66.7 | 65.4 | 67.8 |
| 315 | 68.1 | 68.4 | 68.0 | 67.5 | 67.4 | 67.1 | 67.5 | 67.0 | 66.1 |

AZ DEPTH: 980 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 67.3 | 67.0 | 67.3 | 66.6 | 65.6 | 66.0 | 65.8 | 65.4 | 63.4 |
| 45 | 63.7 | 63.8 | 63.8 | 63.4 | 61.8 | 62.1 | 62.9 | 62.1 | 62.3 |
| 90 | 62.2 | 61.9 | 62.9 | 62.7 | 61.4 | 60.7 | 58.3 | 60.6 | 61.6 |
| 135 | 63.0 | 65.2 | 63.2 | 63.1 | 63.7 | 65.0 | 64.1 | 65.6 | 64.8 |
| 180 | 64.3 | 64.2 | 64.1 | 64.1 | 63.8 | 64.0 | 63.4 | 62.1 | 63.0 |
| 225 | 62.2 | 63.5 | 62.5 | 62.8 | 65.2 | 64.9 | 64.9 | 65.7 | 64.6 |
| 270 | 66.3 | 68.3 | 68.4 | 68.6 | 67.3 | 69.5 | 69.3 | 68.4 | 67.1 |
| 315 | 68.1 | 68.9 | 68.9 | 68.7 | 67.4 | 67.7 | 68.2 | 67.9 | 67.7 |

AZ DEPTH: 982 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 68.0 | 66.4 | 67.5 | 66.3 | 67.0 | 68.3 | 66.6 | 66.9 | 67.4 |
| 45 | 66.4 | 65.2 | 66.5 | 65.2 | 64.9 | 66.4 | 66.2 | 65.1 | 64.7 |
| 90 | 65.5 | 64.8 | 65.4 | 65.1 | 65.6 | 66.8 | 65.9 | 65.0 | 64.2 |
| 135 | 65.7 | 66.0 | 64.7 | 64.1 | 64.3 | 64.9 | 65.4 | 65.4 | 65.3 |
| 180 | 64.7 | 64.4 | 63.2 | 63.9 | 63.8 | 63.8 | 62.3 | 63.0 | 65.1 |
| 225 | 64.9 | 63.8 | 64.7 | 66.1 | 66.4 | 66.8 | 66.7 | 66.2 | 66.0 |
| 270 | 66.7 | 68.1 | 69.0 | 68.7 | 69.8 | 69.5 | 68.8 | 67.7 | 67.3 |
| 315 | 69.1 | 70.0 | 69.0 | 67.3 | 65.7 | 67.5 | 68.0 | 67.7 | 68.1 |

# 5 DEGREE RADII REPORT

Radii in feet

DEPTH: 984 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 68.1 | 67.9 | 67.8 | 67.7 | 67.5 | 68.3 | 68.6 | 67.4 | 68.7 |
| 45 | 70.8 | 70.3 | 69.4 | 66.1 | 68.4 | 67.8 | 67.6 | 68.5 | 67.0 |
| 90 | 65.1 | 66.4 | 67.8 | 68.3 | 67.3 | 66.3 | 65.6 | 64.4 | 64.5 |
| 135 | 66.0 | 65.0 | 64.0 | 64.7 | 64.4 | 65.1 | 65.2 | 64.6 | 64.6 |
| 180 | 64.3 | 62.2 | 61.9 | 62.4 | 62.8 | 63.0 | 62.1 | 62.7 | 65.7 |
| 225 | 64.8 | 64.0 | 65.0 | 66.0 | 65.8 | 66.4 | 64.8 | 64.1 | 66.2 |
| 270 | 67.1 | 67.3 | 66.2 | 68.2 | 68.3 | 68.0 | 67.0 | 65.5 | 66.8 |
| 315 | 69.7 | 70.2 | 67.5 | 65.2 | 65.5 | 67.3 | 67.6 | 66.7 | 67.8 |

DEPTH: 986 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 69.2 | 68.1 | 69.3 | 69.6 | 68.1 | 68.3 | 69.4 | 67.3 | 69.0 |
| 45 | 70.7 | 70.2 | 68.6 | 66.1 | 68.0 | 67.8 | 66.4 | 68.5 | 67.0 |
| 90 | 65.4 | 65.7 | 67.1 | 67.3 | 65.8 | 63.7 | 64.2 | 63.8 | 64.1 |
| 135 | 65.0 | 64.0 | 63.7 | 66.0 | 65.3 | 65.4 | 65.1 | 64.9 | 63.3 |
| 180 | 62.8 | 60.6 | 60.9 | 60.6 | 61.3 | 61.5 | 61.6 | 62.8 | 66.3 |
| 225 | 65.0 | 63.3 | 64.7 | 66.3 | 63.4 | 63.8 | 62.5 | 61.5 | 64.4 |
| 270 | 64.7 | 64.4 | 63.9 | 64.1 | 66.0 | 65.7 | 65.8 | 64.7 | 65.6 |
| 315 | 67.5 | 70.4 | 68.6 | 65.1 | 66.7 | 68.3 | 68.0 | 69.2 | 68.5 |

DEPTH: 988 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 68.2 | 69.3 | 68.4 | 69.8 | 70.7 | 69.3 | 68.7 | 69.4 | 70.9 |
| 45 | 69.7 | 70.2 | 70.6 | 68.7 | 67.7 | 66.7 | 67.5 | 67.2 | 68.0 |
| 90 | 66.6 | 66.3 | 66.7 | 66.7 | 64.9 | 63.3 | 62.1 | 62.7 | 62.8 |
| 135 | 63.1 | 63.1 | 62.7 | 66.0 | 65.7 | 65.4 | 64.5 | 65.3 | 64.1 |
| 180 | 61.1 | 59.5 | 59.8 | 59.8 | 60.0 | 59.1 | 60.5 | 60.5 | 61.1 |
| 225 | 64.1 | 66.3 | 66.1 | 65.5 | 66.5 | 63.2 | 63.5 | 61.8 | 61.8 |
| 270 | 63.9 | 63.4 | 63.1 | 63.5 | 62.7 | 65.2 | 64.8 | 65.3 | 63.9 |
| 315 | 65.0 | 67.0 | 66.7 | 65.7 | 67.5 | 68.2 | 70.0 | 68.8 | 67.1 |

DEPTH: 990 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 65.1 | 67.0 | 67.2 | 68.4 | 67.2 | 68.6 | 69.0 | 71.9 | 71.5 |
| 45 | 70.4 | 69.0 | 68.3 | 68.6 | 67.7 | 67.7 | 68.0 | 68.8 | 69.1 |
| 90 | 68.3 | 66.6 | 67.6 | 66.6 | 64.1 | 62.7 | 60.7 | 59.7 | 59.7 |
| 135 | 60.3 | 59.8 | 61.5 | 62.4 | 63.3 | 63.7 | 63.2 | 63.9 | 57.6 |
| 180 | 57.0 | 57.2 | 57.6 | 57.2 | 57.3 | 58.5 | 58.9 | 62.3 | 66.9 |
| 225 | 67.3 | 68.0 | 66.3 | 65.4 | 64.4 | 62.6 | 61.8 | 60.8 | 59.9 |
| 270 | 62.1 | 61.5 | 61.3 | 60.8 | 61.5 | 60.9 | 61.2 | 61.1 | 64.5 |
| 315 | 62.5 | 64.4 | 65.1 | 66.0 | 67.4 | 68.6 | 66.0 | 65.0 | 65.1 |

DEPTH: 992 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 67.4 | 69.0 | 68.5 | 68.3 | 67.4 | 66.5 | 67.1 | 71.0 | 72.4 |
| 45 | 69.3 | 67.9 | 68.4 | 67.5 | 67.5 | 68.1 | 68.6 | 68.7 | 67.3 |
| 90 | 65.3 | 65.2 | 59.8 | 60.5 | 61.2 | 57.9 | 57.2 | 57.2 | 59.8 |
| 135 | 58.2 | 57.7 | 57.0 | 57.8 | 61.5 | 62.5 | 63.8 | 64.2 | 56.4 |
| 180 | 55.0 | 55.6 | 55.1 | 55.6 | 56.9 | 55.7 | 57.1 | 60.2 | 64.7 |
| 225 | 65.7 | 65.8 | 64.0 | 62.1 | 59.4 | 60.8 | 57.9 | 55.6 | 58.5 |
| 270 | 58.0 | 58.8 | 57.9 | 58.7 | 58.7 | 59.2 | 59.2 | 59.6 | 60.9 |
| 315 | 60.3 | 62.8 | 64.3 | 63.2 | 65.9 | 66.4 | 66.0 | 67.0 | 68.6 |

# 5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 994 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 70.8 | 71.9 | 71.7 | 70.5 | 70.2 | 69.3 | 68.3 | 72.2 | 72.0 |
| 45 | 69.8 | 68.7 | 70.3 | 67.8 | 68.6 | 68.3 | 68.3 | 67.9 | 67.7 |
| 90 | 68.1 | 64.6 | 66.1 | 64.7 | 61.6 | 63.0 | 57.6 | 60.5 | 59.4 |
| 135 | 61.6 | 59.8 | 64.7 | 70.9 | 69.3 | 67.3 | 66.1 | 65.4 | 59.7 |
| 180 | 53.4 | 59.1 | 52.7 | 57.9 | 54.3 | 60.3 | 55.6 | 63.8 | 64.1 |
| 225 | 65.9 | 65.3 | 64.8 | 63.8 | 64.1 | 64.2 | 62.2 | 58.2 | 58.8 |
| 270 | 58.7 | 59.8 | 59.8 | 59.7 | 59.2 | 59.7 | 60.2 | 59.7 | 58.7 |
| 315 | 60.2 | 63.3 | 64.2 | 64.9 | 65.2 | 66.1 | 67.3 | 69.6 | 70.3 |

AZ DEPTH: 996 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 71.0 | 71.5 | 70.4 | 71.6 | 72.0 | 72.3 | 71.5 | 72.8 | 73.2 |
| 45 | 72.4 | 72.4 | 72.9 | 70.9 | 70.9 | 71.5 | 70.3 | 70.8 | 69.3 |
| 90 | 70.8 | 69.9 | 68.3 | 70.3 | 67.8 | 68.7 | 67.0 | 69.0 | 67.8 |
| 135 | 69.8 | 71.5 | 70.5 | 71.6 | 71.0 | 70.3 | 70.0 | 69.0 | 70.6 |
| 180 | 72.3 | 71.2 | 70.0 | 68.6 | 68.3 | 69.3 | 69.1 | 68.1 | 68.4 |
| 225 | 68.5 | 68.6 | 68.0 | 66.3 | 66.9 | 67.3 | 66.6 | 65.9 | 66.0 |
| 270 | 65.0 | 66.0 | 64.1 | 65.4 | 64.7 | 62.0 | 61.2 | 61.2 | 59.0 |
| 315 | 59.7 | 62.5 | 63.6 | 63.3 | 63.2 | 64.4 | 65.5 | 65.2 | 70.0 |

AZ DEPTH: 998 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 70.7 | 68.0 | 68.1 | 70.2 | 72.5 | 72.9 | 71.6 | 73.1 | 72.9 |
| 45 | 72.2 | 73.0 | 73.3 | 73.3 | 73.2 | 72.5 | 71.5 | 72.3 | 70.4 |
| 90 | 70.8 | 70.5 | 71.2 | 70.3 | 69.3 | 68.1 | 68.6 | 71.1 | 71.3 |
| 135 | 71.2 | 71.8 | 71.2 | 71.3 | 71.0 | 71.3 | 71.9 | 71.7 | 73.4 |
| 180 | 72.4 | 71.9 | 71.1 | 69.5 | 69.1 | 69.4 | 68.3 | 69.0 | 68.6 |
| 225 | 69.6 | 70.1 | 69.6 | 69.9 | 68.9 | 68.5 | 66.7 | 67.2 | 65.5 |
| 270 | 68.0 | 68.4 | 68.3 | 67.6 | 68.3 | 65.0 | 63.6 | 61.0 | 58.9 |
| 315 | 58.9 | 61.8 | 62.3 | 59.8 | 60.3 | 61.5 | 62.2 | 63.4 | 69.0 |

AZ DEPTH: 1000 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 68.9 | 65.8 | 68.0 | 68.9 | 72.6 | 72.3 | 72.4 | 71.7 | 69.3 |
| 45 | 72.7 | 72.2 | 72.5 | 72.0 | 71.3 | 71.7 | 70.8 | 68.9 | 70.9 |
| 90 | 70.6 | 70.3 | 67.7 | 67.6 | 62.7 | 65.4 | 71.2 | 70.7 | 69.6 |
| 135 | 71.5 | 70.5 | 70.0 | 69.6 | 70.9 | 71.7 | 71.1 | 72.6 | 70.6 |
| 180 | 71.5 | 71.0 | 68.8 | 68.3 | 67.6 | 66.8 | 68.0 | 68.3 | 68.7 |
| 225 | 68.7 | 69.9 | 70.9 | 69.8 | 69.7 | 68.5 | 67.5 | 64.1 | 63.4 |
| 270 | 68.1 | 67.8 | 67.9 | 66.4 | 64.4 | 64.7 | 58.2 | 58.2 | 56.1 |
| 315 | 58.7 | 60.5 | 57.3 | 58.6 | 59.7 | 59.6 | 62.8 | 68.6 | 69.7 |

AZ DEPTH: 1002 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 67.7 | 68.6 | 67.3 | 68.2 | 68.8 | 70.8 | 70.7 | 70.9 | 69.8 |
| 45 | 69.5 | 68.9 | 70.8 | 70.9 | 71.0 | 70.8 | 70.2 | 68.2 | 67.4 |
| 90 | 70.2 | 66.2 | 66.5 | 65.1 | 62.5 | 62.7 | 65.2 | 68.6 | 67.5 |
| 135 | 69.9 | 70.3 | 68.8 | 68.6 | 69.8 | 69.9 | 70.5 | 70.8 | 70.1 |
| 180 | 70.5 | 71.2 | 70.9 | 68.0 | 67.7 | 66.3 | 67.0 | 68.3 | 68.5 |
| 225 | 67.7 | 67.1 | 67.0 | 69.4 | 68.4 | 69.6 | 66.4 | 65.7 | 60.5 |
| 270 | 64.8 | 66.0 | 65.1 | 63.3 | 61.6 | 61.6 | 59.1 | 56.5 | 55.0 |
| 315 | 56.8 | 58.9 | 57.5 | 57.3 | 57.5 | 57.2 | 57.9 | 61.5 | 63.1 |

# 5 DEGREE RADII REPORT

Radii in feet

DEPTH: 1004 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 63.8 | 68.4 | 69.0 | 69.1 | 68.8 | 70.1 | 71.7 | 70.2 | 69.9 |
| 45 | 69.3 | 69.6 | 70.0 | 70.2 | 70.3 | 69.9 | 68.8 | 66.4 | 67.0 |
| 90 | 69.6 | 66.9 | 66.1 | 65.7 | 64.4 | 65.9 | 69.6 | 69.3 | 67.8 |
| 135 | 71.2 | 69.9 | 68.0 | 68.4 | 68.8 | 69.1 | 70.1 | 69.5 | 69.8 |
| 180 | 69.3 | 69.8 | 69.9 | 66.6 | 71.1 | 69.9 | 68.0 | 69.1 | 69.4 |
| 225 | 68.0 | 66.3 | 66.7 | 68.1 | 68.8 | 68.6 | 67.8 | 67.0 | 64.1 |
| 270 | 67.0 | 64.3 | 64.3 | 63.0 | 63.0 | 62.8 | 59.8 | 56.7 | 55.3 |
| 315 | 56.5 | 57.6 | 57.8 | 57.6 | 56.6 | 55.4 | 55.0 | 58.3 | 60.2 |

DEPTH: 1006 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 60.3 | 67.8 | 68.1 | 67.8 | 68.0 | 69.2 | 70.8 | 69.6 | 69.0 |
| 45 | 69.1 | 70.2 | 70.3 | 70.3 | 69.6 | 69.1 | 68.3 | 67.4 | 68.0 |
| 90 | 69.5 | 69.7 | 69.2 | 64.8 | 65.4 | 65.1 | 69.2 | 70.3 | 67.5 |
| 135 | 69.9 | 69.8 | 64.6 | 65.8 | 65.6 | 65.4 | 67.5 | 67.1 | 67.7 |
| 180 | 66.6 | 69.0 | 67.6 | 64.7 | 69.7 | 71.3 | 69.8 | 68.9 | 69.8 |
| 225 | 69.8 | 66.0 | 64.6 | 65.5 | 69.0 | 68.5 | 67.0 | 67.2 | 66.0 |
| 270 | 66.0 | 60.8 | 62.3 | 62.0 | 60.7 | 59.4 | 58.5 | 56.5 | 54.4 |
| 315 | 55.4 | 54.6 | 55.6 | 55.0 | 54.2 | 52.5 | 52.9 | 54.8 | 57.9 |

DEPTH: 1008 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 56.9 | 66.9 | 66.7 | 65.3 | 66.2 | 68.2 | 69.3 | 68.9 | 69.4 |
| 45 | 68.3 | 67.9 | 69.3 | 68.0 | 70.4 | 69.1 | 69.6 | 68.4 | 66.0 |
| 90 | 67.7 | 68.7 | 62.3 | 63.4 | 63.1 | 63.4 | 66.0 | 63.4 | 63.4 |
| 135 | 69.5 | 62.5 | 62.1 | 64.9 | 63.1 | 63.8 | 66.4 | 64.9 | 64.6 |
| 180 | 64.1 | 64.9 | 67.7 | 63.4 | 61.4 | 67.6 | 69.3 | 66.0 | 69.2 |
| 225 | 69.3 | 62.0 | 60.9 | 62.1 | 67.7 | 66.4 | 65.9 | 65.1 | 63.8 |
| 270 | 64.1 | 59.0 | 59.6 | 60.7 | 59.1 | 57.4 | 56.6 | 55.5 | 53.2 |
| 315 | 53.0 | 52.4 | 53.3 | 51.8 | 52.0 | 50.4 | 49.4 | 51.1 | 54.0 |

DEPTH: 1010 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 49.1 | 55.3 | 60.5 | 63.8 | 65.0 | 64.9 | 67.8 | 68.9 | 67.5 |
| 45 | 67.5 | 67.7 | 67.7 | 67.2 | 66.9 | 69.2 | 67.0 | 67.5 | 63.7 |
| 90 | 63.9 | 66.0 | 61.2 | 60.5 | 60.7 | 61.3 | 62.1 | 62.0 | 62.9 |
| 135 | 63.0 | 68.0 | 61.6 | 60.8 | 63.6 | 62.1 | 63.5 | 65.0 | 63.2 |
| 180 | 64.4 | 63.5 | 64.3 | 65.6 | 58.5 | 60.5 | 68.3 | 68.0 | 64.4 |
| 225 | 65.4 | 61.2 | 61.2 | 60.8 | 61.2 | 63.3 | 65.3 | 64.4 | 63.8 |
| 270 | 63.3 | 59.5 | 57.9 | 59.9 | 59.3 | 57.6 | 55.9 | 55.0 | 52.4 |
| 315 | 52.0 | 52.3 | 53.0 | 52.6 | 50.8 | 49.5 | 47.9 | 45.9 | 47.8 |

DEPTH: 1014 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 46.4 | 50.4 | 55.9 | 59.4 | 60.5 | 61.6 | 62.8 | 62.8 | 62.4 |
| 45 | 62.4 | 62.6 | 61.8 | 62.8 | 63.6 | 63.1 | 59.3 | 62.1 | 64.7 |
| 90 | 64.8 | 71.7 | 73.3 | 71.6 | 72.9 | 74.1 | 72.3 | 70.3 | 69.3 |
| 135 | 71.5 | 72.1 | 73.4 | 73.6 | 71.9 | 71.6 | 71.2 | 74.2 | 72.6 |
| 180 | 71.9 | 72.2 | 72.8 | 72.5 | 71.6 | 68.3 | 65.9 | 69.6 | 72.1 |
| 225 | 65.1 | 70.9 | 70.6 | 60.3 | 64.5 | 69.0 | 69.1 | 61.8 | 63.8 |
| 270 | 60.5 | 61.2 | 62.7 | 66.7 | 68.3 | 70.2 | 69.0 | 67.7 | 64.9 |
| 315 | 56.2 | 51.1 | 47.8 | 44.5 | 43.8 | 42.4 | 39.6 | 38.6 | 43.6 |

# 5 DEGREE RADII REPORT

Radii in feet

| AZ | DEPTH: 1016 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 42.1 | 45.9 | 50.3 | 54.5 | 56.8 | 59.5 | 61.5 | 60.8 | 59.4 |
| 45 | 59.9 | 59.5 | 59.1 | 60.8 | 60.8 | 59.4 | 60.4 | 59.5 | 63.8 |
| 90 | 64.4 | 63.0 | 69.2 | 68.7 | 68.7 | 68.0 | 66.9 | 67.6 | 67.0 |
| 135 | 67.0 | 71.2 | 70.7 | 70.9 | 70.2 | 69.1 | 68.3 | 68.0 | 68.2 |
| 180 | 67.1 | 68.2 | 67.7 | 69.0 | 67.7 | 64.4 | 62.8 | 64.6 | 64.8 |
| 225 | 63.4 | 67.2 | 67.3 | 64.6 | 62.0 | 63.7 | 63.8 | 62.8 | 60.4 |
| 270 | 57.9 | 58.5 | 60.3 | 64.6 | 65.5 | 66.7 | 66.0 | 63.9 | 60.6 |
| 315 | 54.7 | 48.5 | 44.3 | 42.0 | 40.8 | 38.1 | 36.4 | 35.5 | 38.9 |

| AZ | DEPTH: 1018 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 34.1 | 42.3 | 47.9 | 52.3 | 54.9 | 57.0 | 57.9 | 56.8 | 57.2 |
| 45 | 56.8 | 57.1 | 57.0 | 55.6 | 56.9 | 57.9 | 57.8 | 58.4 | 57.4 |
| 90 | 59.8 | 60.0 | 60.8 | 67.3 | 66.0 | 66.7 | 64.7 | 64.7 | 65.3 |
| 135 | 64.7 | 69.2 | 69.9 | 69.3 | 64.0 | 66.3 | 64.1 | 61.4 | 65.8 |
| 180 | 66.0 | 63.1 | 62.9 | 63.4 | 65.3 | 60.9 | 60.5 | 61.2 | 63.2 |
| 225 | 61.3 | 61.0 | 61.8 | 58.3 | 59.2 | 60.0 | 60.3 | 60.1 | 59.8 |
| 270 | 55.7 | 53.6 | 56.6 | 61.8 | 64.1 | 64.8 | 63.3 | 60.1 | 56.9 |
| 315 | 51.0 | 44.1 | 41.1 | 38.5 | 38.0 | 36.4 | 34.2 | 33.6 | 33.4 |

| AZ | DEPTH: 1020 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 34.0 | 40.4 | 47.1 | 51.1 | 54.3 | 53.7 | 54.3 | 53.8 | 53.3 |
| 45 | 54.6 | 54.8 | 54.2 | 54.0 | 55.6 | 55.6 | 55.3 | 55.3 | 56.3 |
| 90 | 58.0 | 57.9 | 61.1 | 60.8 | 57.6 | 59.2 | 62.8 | 63.1 | 62.8 |
| 135 | 57.6 | 56.3 | 56.2 | 57.2 | 58.9 | 59.2 | 59.2 | 59.2 | 61.2 |
| 180 | 60.9 | 59.4 | 56.5 | 56.1 | 56.6 | 57.6 | 59.7 | 58.5 | 57.6 |
| 225 | 58.0 | 56.8 | 56.4 | 55.9 | 56.7 | 56.8 | 57.3 | 56.7 | 52.7 |
| 270 | 51.5 | 51.2 | 54.8 | 59.6 | 61.6 | 62.4 | 60.2 | 56.2 | 47.1 |
| 315 | 42.7 | 39.3 | 36.7 | 35.4 | 33.2 | 30.8 | 30.8 | 30.8 | 31.8 |

| AZ | DEPTH: 1022 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 27.3 | 29.9 | 43.2 | 45.6 | 47.2 | 50.7 | 50.4 | 50.5 | 50.3 |
| 45 | 51.1 | 52.3 | 51.6 | 49.5 | 50.5 | 51.4 | 51.4 | 52.4 | 53.0 |
| 90 | 54.0 | 54.4 | 55.4 | 55.2 | 55.3 | 55.0 | 55.2 | 57.1 | 58.9 |
| 135 | 55.1 | 53.6 | 53.5 | 53.0 | 55.3 | 56.8 | 56.5 | 55.7 | 56.9 |
| 180 | 57.0 | 55.7 | 54.6 | 53.2 | 52.2 | 52.7 | 53.9 | 55.3 | 54.5 |
| 225 | 53.7 | 55.1 | 54.2 | 53.0 | 52.4 | 54.5 | 54.5 | 53.0 | 49.2 |
| 270 | 50.1 | 49.2 | 48.9 | 52.6 | 57.6 | 60.4 | 59.8 | 54.9 | 44.5 |
| 315 | 39.6 | 36.7 | 33.8 | 31.6 | 29.3 | 28.4 | 28.2 | 29.0 | 28.2 |

| AZ | DEPTH: 1024 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 93.2 | 95.9 | 42.2 | 41.4 | 41.9 | 45.0 | 46.4 | 46.9 | 47.3 |
| 45 | 44.9 | 43.6 | 46.3 | 46.2 | 44.2 | 47.0 | 47.5 | 48.0 | 49.1 |
| 90 | 50.4 | 51.4 | 51.7 | 52.4 | 51.7 | 51.4 | 52.4 | 51.0 | 51.3 |
| 135 | 51.2 | 51.3 | 50.7 | 49.7 | 50.5 | 53.1 | 53.3 | 52.8 | 53.9 |
| 180 | 53.1 | 52.4 | 50.4 | 49.9 | 50.5 | 49.9 | 50.5 | 52.1 | 51.6 |
| 225 | 52.0 | 51.6 | 51.4 | 51.1 | 50.1 | 51.1 | 50.1 | 47.1 | 45.9 |
| 270 | 45.4 | 45.2 | 46.5 | 48.4 | 50.5 | 55.6 | 57.7 | 75.9 | 94.9 |
| 315 | 95.4 | 94.6 | 95.5 | 95.7 | 96.5 | 99.7 | 98.6 | 96.6 | 94.0 |

5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 1026 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 93.9 | 65.5 | 38.3 | 38.2 | 39.0 | 41.0 | 42.8 | 43.1 | 43.6 |
| 45 | 44.9 | 43.9 | 43.6 | 40.9 | 41.7 | 42.7 | 41.9 | 44.0 | 45.2 |
| 90 | 46.3 | 48.5 | 47.1 | 49.4 | 49.0 | 48.8 | 49.0 | 49.5 | 48.5 |
| 135 | 47.8 | 47.3 | 46.1 | 47.2 | 47.8 | 49.4 | 50.1 | 50.9 | 49.8 |
| 180 | 49.3 | 48.1 | 47.3 | 46.8 | 47.7 | 47.5 | 48.3 | 48.8 | 49.2 |
| 225 | 49.1 | 48.7 | 47.6 | 46.6 | 45.2 | 46.5 | 41.3 | 42.0 | 43.5 |
| 270 | 41.8 | 40.7 | 41.9 | 43.1 | 45.5 | 46.8 | 48.2 | 43.6 | 43.0 |
| 315 | 94.0 | 93.3 | 94.8 | 97.3 | 99.0 | 99.3 | 96.5 | 94.3 | 93.4 |

AZ DEPTH: 1028 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 32.8 | 32.8 | 32.8 | 33.9 | 36.2 | 37.1 | 36.7 | 37.1 | 34.7 |
| 45 | 35.1 | 34.0 | 32.9 | 33.5 | 37.8 | 38.0 | 38.8 | 40.4 | 41.4 |
| 90 | 43.5 | 42.6 | 41.8 | 44.3 | 46.2 | 45.5 | 45.6 | 46.2 | 44.9 |
| 135 | 44.6 | 44.2 | 44.0 | 44.7 | 45.2 | 44.4 | 45.5 | 47.3 | 47.2 |
| 180 | 46.5 | 45.8 | 45.3 | 44.4 | 44.3 | 44.9 | 44.8 | 44.5 | 44.2 |
| 225 | 46.1 | 44.8 | 41.9 | 41.5 | 41.3 | 39.3 | 37.9 | 38.8 | 39.4 |
| 270 | 38.1 | 39.3 | 38.6 | 38.3 | 40.4 | 39.9 | 41.6 | 39.6 | 35.4 |
| 315 | 32.7 | 32.1 | 32.6 | 32.1 | 93.7 | 93.7 | 93.7 | 93.7 | 63.3 |

AZ DEPTH: 1030 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 35.3 | 33.7 | 32.8 | 31.3 | 31.5 | 31.5 | 30.9 | 32.4 | 32.4 |
| 45 | 33.3 | 31.9 | 29.8 | 32.8 | 33.9 | 36.7 | 38.0 | 38.1 | 38.9 |
| 90 | 37.9 | 40.0 | 39.7 | 41.7 | 41.0 | 41.5 | 40.4 | 41.0 | 41.3 |
| 135 | 41.2 | 40.6 | 41.6 | 42.1 | 41.6 | 41.9 | 41.9 | 42.8 | 43.0 |
| 180 | 42.3 | 42.1 | 41.6 | 41.5 | 42.0 | 41.4 | 41.0 | 40.7 | 40.0 |
| 225 | 41.6 | 39.1 | 38.2 | 37.1 | 35.7 | 34.0 | 35.7 | 37.0 | 35.9 |
| 270 | 36.2 | 35.0 | 34.2 | 33.3 | 31.7 | 31.8 | 30.6 | 30.0 | 29.7 |
| 315 | 27.9 | 30.0 | 30.6 | 28.6 | 28.5 | 67.7 | 62.7 | 55.2 | 43.5 |

AZ DEPTH: 1032 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 30.9 | 30.9 | 28.7 | 27.9 | 26.2 | 24.6 | 24.5 | 26.5 | 30.4 |
| 45 | 31.2 | 29.9 | 27.6 | 28.1 | 27.5 | 28.6 | 30.1 | 32.2 | 33.0 |
| 90 | 35.3 | 35.4 | 35.8 | 36.1 | 37.1 | 34.8 | 35.7 | 36.8 | 35.4 |
| 135 | 35.8 | 36.4 | 38.4 | 36.7 | 37.1 | 37.8 | 36.9 | 37.4 | 35.7 |
| 180 | 38.0 | 36.6 | 37.0 | 38.0 | 38.0 | 37.8 | 36.3 | 36.7 | 36.2 |
| 225 | 35.9 | 37.1 | 37.1 | 35.1 | 33.5 | 31.2 | 29.6 | 30.2 | 31.3 |
| 270 | 31.2 | 32.2 | 31.5 | 29.9 | 28.8 | 27.9 | 26.0 | 25.5 | 25.6 |
| 315 | 24.4 | 25.4 | 26.2 | 26.9 | 27.4 | 61.8 | 59.2 | 45.1 | 30.9 |

AZ DEPTH: 1034 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 26.3 | 24.9 | 22.9 | 22.4 | 22.1 | 19.8 | 19.5 | 19.8 | 22.2 |
| 45 | 24.0 | 25.3 | 25.3 | 25.3 | 25.1 | 26.3 | 27.9 | 27.9 | 29.0 |
| 90 | 28.3 | 29.6 | 30.6 | 31.2 | 31.5 | 30.6 | 31.5 | 31.0 | 30.6 |
| 135 | 30.9 | 31.8 | 32.5 | 31.6 | 32.7 | 32.5 | 32.0 | 33.2 | 32.8 |
| 180 | 33.9 | 33.5 | 31.2 | 29.9 | 32.2 | 32.6 | 34.1 | 34.1 | 35.0 |
| 225 | 35.4 | 34.1 | 32.5 | 31.0 | 29.4 | 29.9 | 28.6 | 27.9 | 27.2 |
| 270 | 26.4 | 25.4 | 26.4 | 25.4 | 23.7 | 23.1 | 22.7 | 21.1 | 20.4 |
| 315 | 20.6 | 21.0 | 20.3 | 19.7 | 21.8 | 22.8 | 24.7 | 25.2 | 26.4 |

5 DEGREE RADII REPORT

Radii in feet

| AZ | DEPTH: 1035 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 22.4 | 22.4 | 20.4 | 21.1 | 20.8 | 20.2 | 20.5 | 20.1 | 18.7 |
| 45 | 16.2 | 16.3 | 17.2 | 18.4 | 19.0 | 19.6 | 17.3 | 21.2 | 24.3 |
| 90 | 25.8 | 26.0 | 26.0 | 26.8 | 30.3 | 30.8 | 27.6 | 27.0 | 28.2 |
| 135 | 27.9 | 28.1 | 29.2 | 28.8 | 30.3 | 30.8 | 10.9 | 11.4 | 15.0 |
| 180 | 18.7 | 20.1 | 21.1 | 24.1 | 27.0 | 20.2 | 19.8 | 27.6 | 27.2 |
| 225 | 30.1 | 33.6 | 32.5 | 35.5 | 33.5 | 32.0 | 27.2 | 27.9 | 28.7 |
| 270 | 27.6 | 23.7 | 23.1 | 22.1 | 20.8 | 19.1 | 18.2 | 18.2 | 17.7 |
| 315 | 17.3 | 17.9 | 16.3 | 16.9 | 16.2 | 16.6 | 18.5 | 19.3 | 20.6 |

| AZ | DEPTH: 1036 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 12.6 | 13.1 | 13.9 | 13.0 | 13.6 | 10.5 | 12.2 | 4.7 | 4.6 |
| 45 | 4.8 | 5.1 | 10.2 | 11.0 | 11.1 | 10.8 | 11.5 | 10.4 | 8.9 |
| 90 | 9.1 | 10.9 | 8.1 | 7.8 | 7.8 | 7.2 | 6.9 | 7.1 | 7.1 |
| 135 | 7.2 | 7.1 | 7.1 | 6.6 | 6.5 | 6.4 | 6.5 | 6.6 | 6.8 |
| 180 | 6.8 | 6.8 | 8.2 | 7.6 | 7.1 | 6.6 | 7.0 | 6.8 | 6.1 |
| 225 | 6.1 | 6.5 | 6.7 | 8.3 | 9.1 | 8.4 | 9.5 | 10.5 | 11.3 |
| 270 | 11.9 | 13.3 | 12.9 | 12.8 | 13.0 | 12.8 | 12.0 | 12.4 | 11.9 |
| 315 | 12.0 | 12.1 | 12.5 | 12.9 | 12.7 | 13.2 | 13.0 | 13.7 | 13.3 |

MAXIMUM HORIZONTAL RADII

| AZM deg | RADIUS ft | DEPTH ft |
|---|---|---|
| 0 | 93.9 | 1026 |
| 2 | 95.3 | 1026 |
| 4 | 96.0 | 1024 |
| 6 | 95.9 | 1024 |
| 8 | 72.0 | 994 |
| 10 | 71.7 | 994 |
| 12 | 70.9 | 996 |
| 14 | 71.5 | 996 |
| 16 | 71.6 | 996 |
| 18 | 71.8 | 996 |
| 20 | 72.6 | 1000 |
| 22 | 72.4 | 1000 |
| 24 | 72.2 | 998 |
| 26 | 73.5 | 998 |
| 28 | 73.6 | 998 |
| 30 | 72.4 | 1000 |
| 32 | 72.1 | 1000 |
| 34 | 73.1 | 998 |
| 36 | 73.2 | 998 |
| 38 | 73.2 | 996 |
| 40 | 73.2 | 996 |
| 42 | 72.7 | 998 |
| 44 | 72.5 | 1000 |
| 46 | 72.9 | 1000 |
| 48 | 73.1 | 996 |
| 50 | 73.0 | 998 |
| 52 | 72.9 | 996 |
| 54 | 73.5 | 996 |
| 56 | 73.5 | 998 |
| 58 | 73.2 | 998 |
| 60 | 73.3 | 998 |
| 62 | 73.2 | 998 |
| 64 | 73.2 | 998 |
| 66 | 73.1 | 998 |
| 68 | 72.5 | 998 |
| 70 | 72.5 | 998 |
| 72 | 72.2 | 998 |
| 74 | 71.4 | 998 |
| 76 | 71.6 | 998 |
| 78 | 72.2 | 998 |
| 80 | 72.3 | 998 |
| 82 | 71.4 | 998 |
| 84 | 71.1 | 1000 |
| 86 | 70.7 | 1000 |
| 88 | 70.5 | 1000 |
| 90 | 70.8 | 996 |
| 92 | 70.9 | 996 |
| 94 | 71.5 | 1014 |
| 96 | 72.0 | 1014 |
| 98 | 72.5 | 1014 |
| 100 | 73.3 | 1014 |
| 102 | 74.7 | 1014 |
| 104 | 71.5 | 1014 |
| 106 | 71.6 | 1014 |
| 108 | 70.9 | 1014 |
| 110 | 72.9 | 1014 |
| 112 | 73.2 | 1014 |
| 114 | 73.8 | 1014 |
| 116 | 74.3 | 1014 |
| 118 | 74.3 | 1014 |
| 120 | 72.3 | 1014 |
| 122 | 72.2 | 1014 |
| 124 | 71.6 | 998 |
| 126 | 70.7 | 960 |
| 128 | 70.6 | 998 |
| 130 | 71.3 | 998 |
| 132 | 71.2 | 998 |
| 134 | 72.2 | 1000 |
| 136 | 71.7 | 1014 |
| 138 | 72.2 | 1014 |
| 140 | 72.1 | 1014 |
| 142 | 72.5 | 1014 |
| 144 | 73.2 | 1014 |
| 146 | 73.6 | 1014 |
| 148 | 73.5 | 1014 |
| 150 | 73.6 | 1014 |
| 152 | 72.7 | 1014 |
| 154 | 71.9 | 1014 |
| 156 | 71.9 | 1014 |
| 158 | 72.2 | 1014 |
| 160 | 71.7 | 1000 |
| 162 | 71.5 | 998 |
| 164 | 71.8 | 998 |
| 166 | 72.2 | 998 |
| 168 | 72.7 | 1000 |
| 170 | 74.2 | 1014 |
| 172 | 72.6 | 998 |
| 174 | 73.2 | 998 |
| 176 | 73.7 | 998 |
| 178 | 73.1 | 960 |

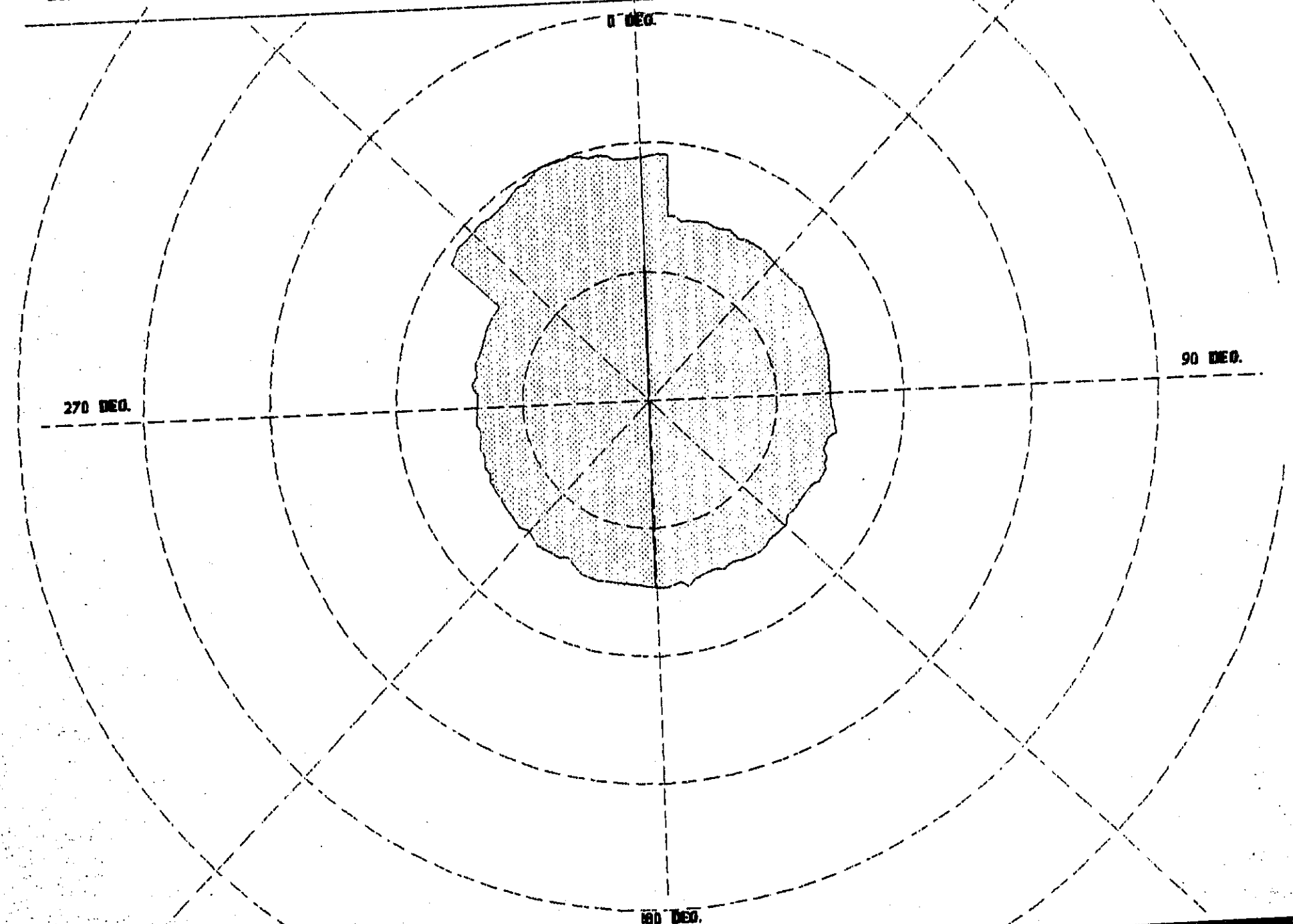
## MAXIMUM HORIZONTAL RADII

| AZM deg | RADIUS ft | DEPTH ft |
|---|---|---|
| 180 | 73.2 | 960 |
| 182 | 72.9 | 958 |
| 184 | 72.6 | 960 |
| 186 | 72.6 | 960 |
| 188 | 72.5 | 1014 |
| 190 | 72.8 | 1014 |
| 192 | 72.8 | 1014 |
| 194 | 72.5 | 960 |
| 196 | 72.8 | 1014 |
| 198 | 73.3 | 1014 |
| 200 | 72.5 | 960 |
| 202 | 73.2 | 960 |
| 204 | 72.8 | 960 |
| 206 | 72.1 | 960 |
| 208 | 70.7 | 1006 |
| 210 | 70.3 | 960 |
| 212 | 70.9 | 960 |
| 214 | 70.9 | 960 |
| 216 | 71.0 | 960 |
| 218 | 71.9 | 1014 |
| 220 | 72.1 | 1014 |
| 222 | 71.7 | 1014 |
| 224 | 70.3 | 1006 |
| 226 | 69.9 | 998 |
| 228 | 71.2 | 1014 |
| 230 | 70.9 | 1014 |
| 232 | 70.5 | 1000 |
| 234 | 71.1 | 1000 |
| 236 | 70.8 | 1014 |
| 238 | 70.6 | 1000 |
| 240 | 69.9 | 998 |
| 242 | 69.6 | 998 |
| 244 | 69.8 | 1000 |
| 246 | 69.7 | 1000 |
| 248 | 69.2 | 1000 |
| 250 | 69.6 | 1002 |
| 252 | 69.7 | 1002 |
| 254 | 69.0 | 1014 |
| 256 | 69.3 | 1014 |
| 258 | 68.6 | 960 |
| 260 | 67.7 | 960 |
| 262 | 67.1 | 958 |
| 264 | 69.0 | 958 |
| 266 | 68.7 | 958 |
| 268 | 68.7 | 960 |
| 270 | 68.1 | 1000 |
| 272 | 68.1 | 1000 |
| 274 | 68.3 | 998 |
| 276 | 68.6 | 998 |
| 278 | 68.6 | 998 |
| 280 | 69.0 | 982 |
| 282 | 69.6 | 982 |
| 284 | 68.9 | 980 |
| 286 | 69.3 | 982 |
| 288 | 69.7 | 982 |
| 290 | 69.8 | 982 |
| 292 | 69.6 | 982 |
| 294 | 70.3 | 1014 |
| 296 | 70.1 | 1014 |
| 298 | 70.3 | 1014 |
| 300 | 69.3 | 980 |
| 302 | 69.0 | 980 |
| 304 | 69.0 | 980 |
| 306 | 94.9 | 1024 |
| 308 | 94.9 | 1024 |
| 310 | 94.9 | 1024 |
| 312 | 95.7 | 1026 |
| 314 | 95.7 | 1024 |
| 316 | 95.2 | 1024 |
| 318 | 96.0 | 1024 |
| 320 | 94.6 | 1024 |
| 322 | 95.2 | 1024 |
| 324 | 95.6 | 1024 |
| 326 | 95.5 | 1024 |
| 328 | 96.2 | 1026 |
| 330 | 97.3 | 1026 |
| 332 | 97.1 | 1026 |
| 334 | 98.4 | 1026 |
| 336 | 99.6 | 1026 |
| 338 | 100.2 | 1026 |
| 340 | 99.7 | 1024 |
| 342 | 99.6 | 1024 |
| 344 | 99.2 | 1024 |
| 346 | 98.1 | 1024 |
| 348 | 96.8 | 1024 |
| 350 | 96.6 | 1024 |
| 352 | 96.0 | 1024 |
| 354 | 94.4 | 1024 |
| 356 | 93.7 | 1024 |
| 358 | 93.9 | 1026 |

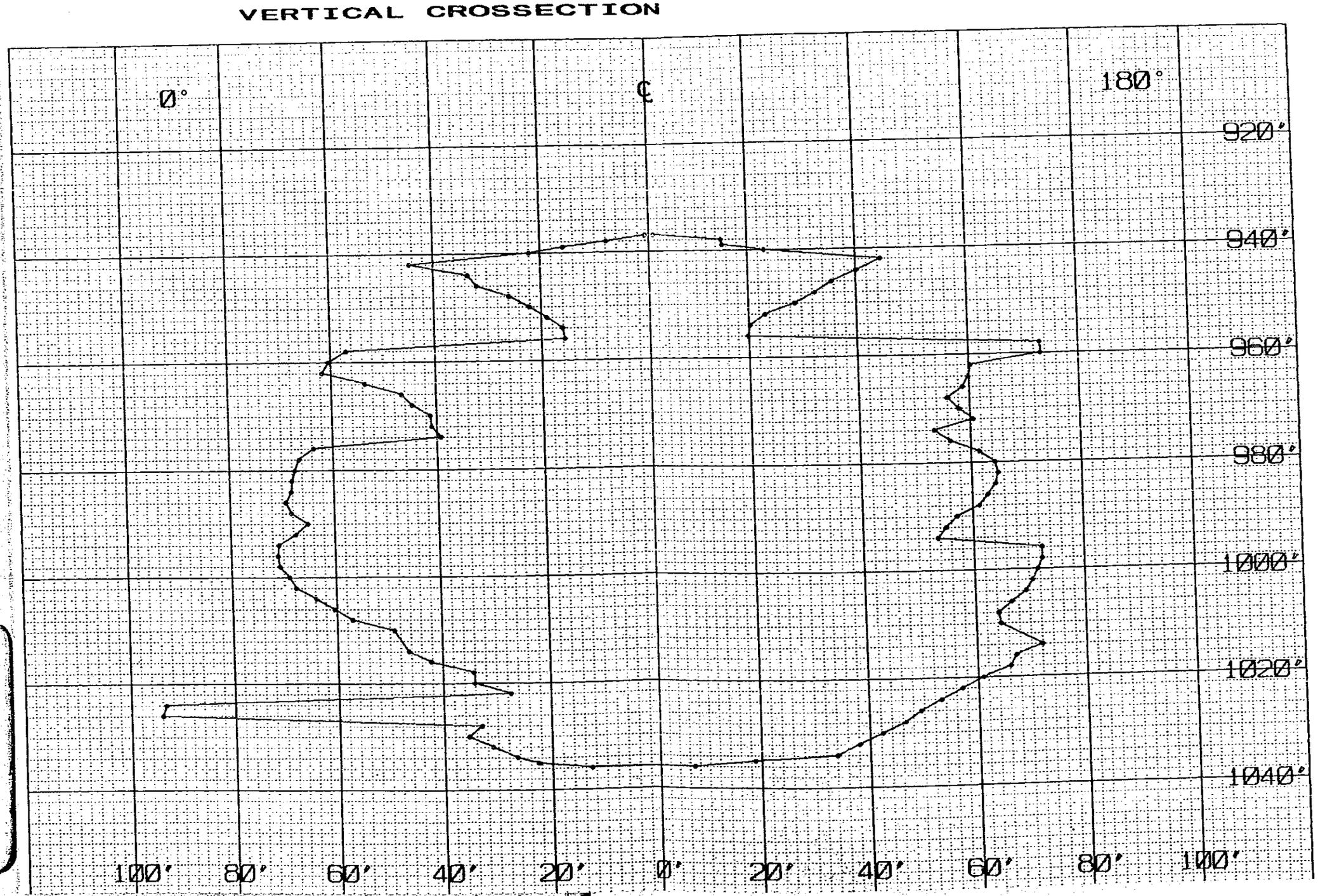
Maximum radius : 100.2
On Azmuth deg : 338

# MAXIMUM RADIUS PLOT

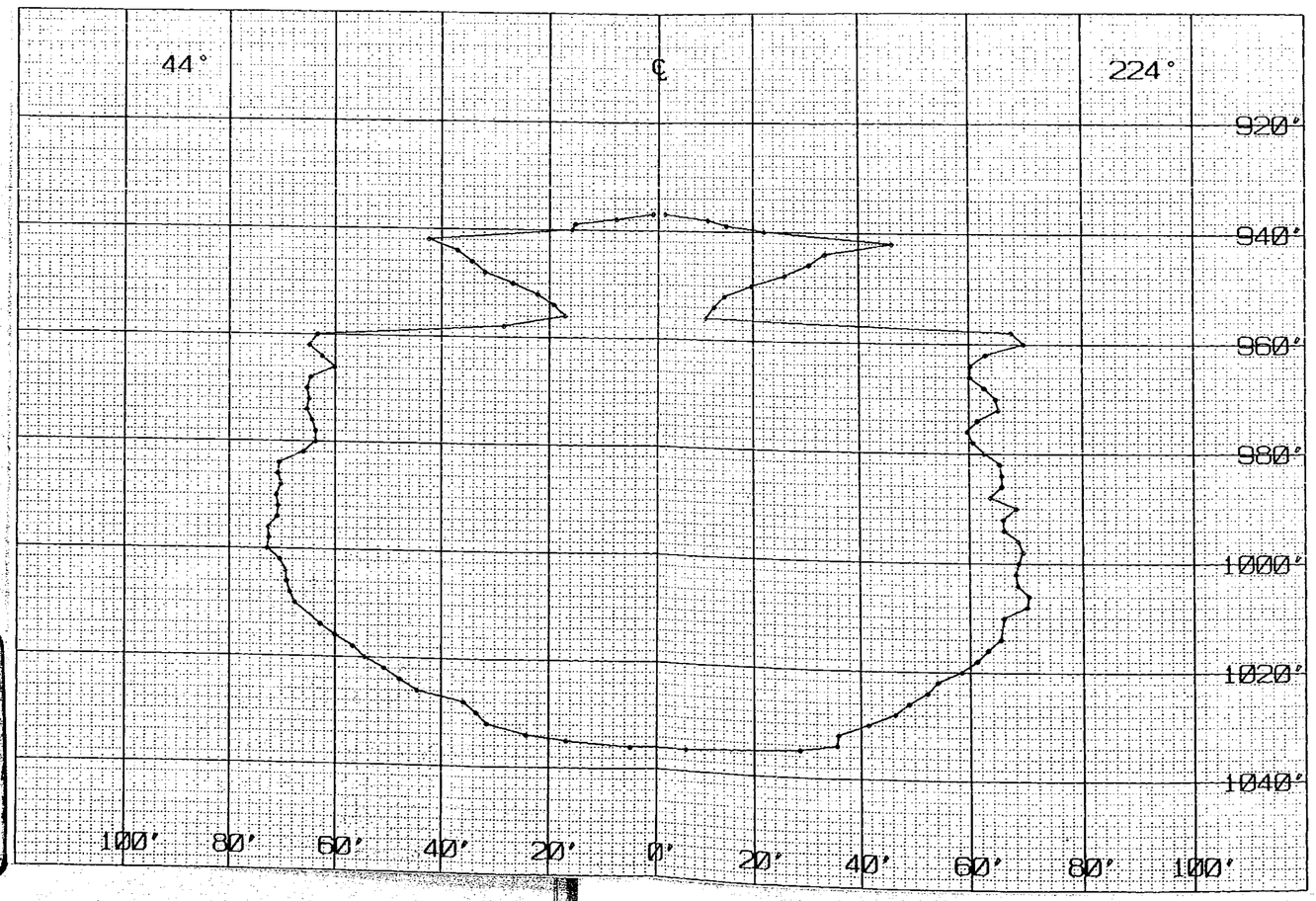
SCALE : 1" = 50'



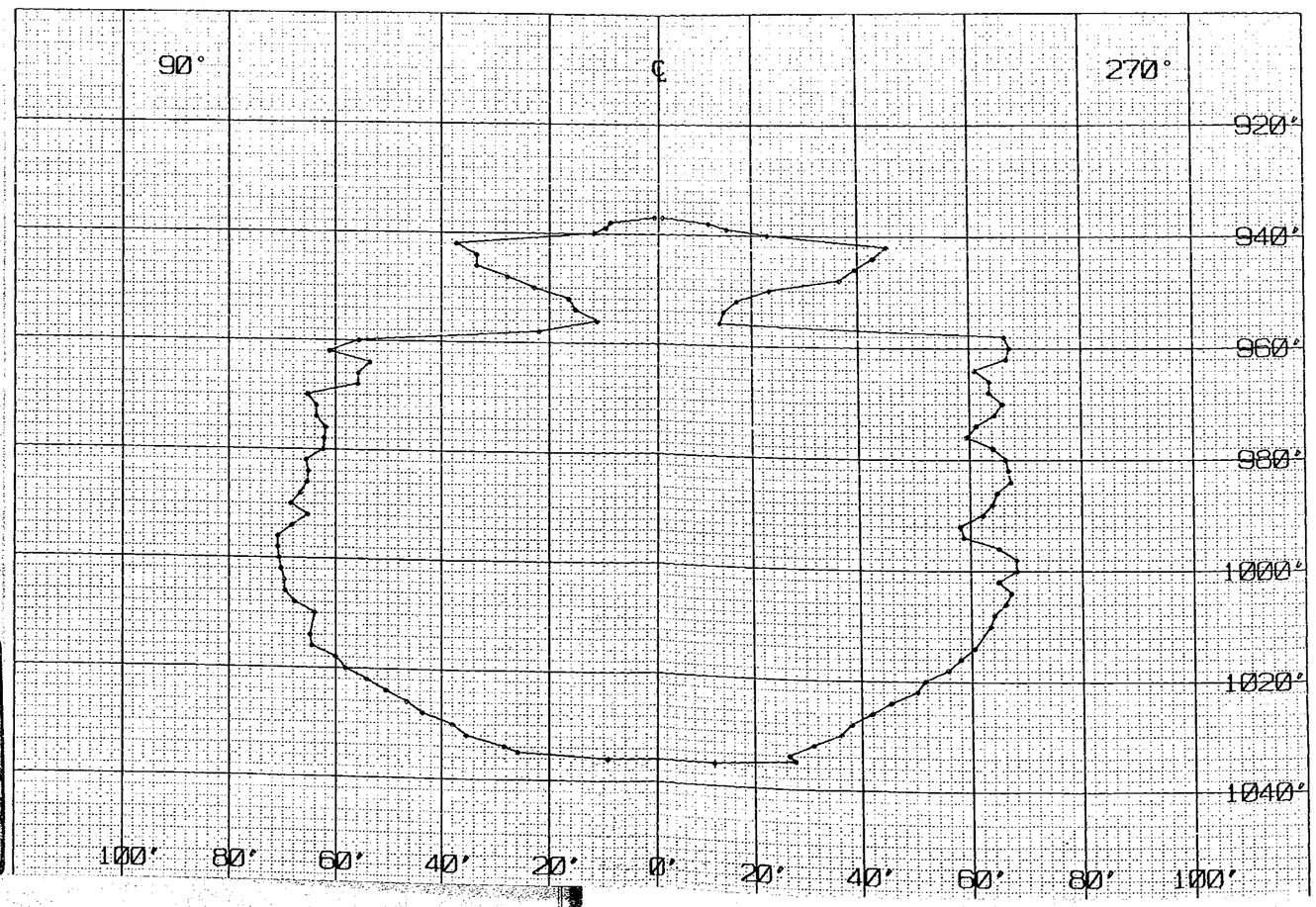
VERTICAL CROSSECTION



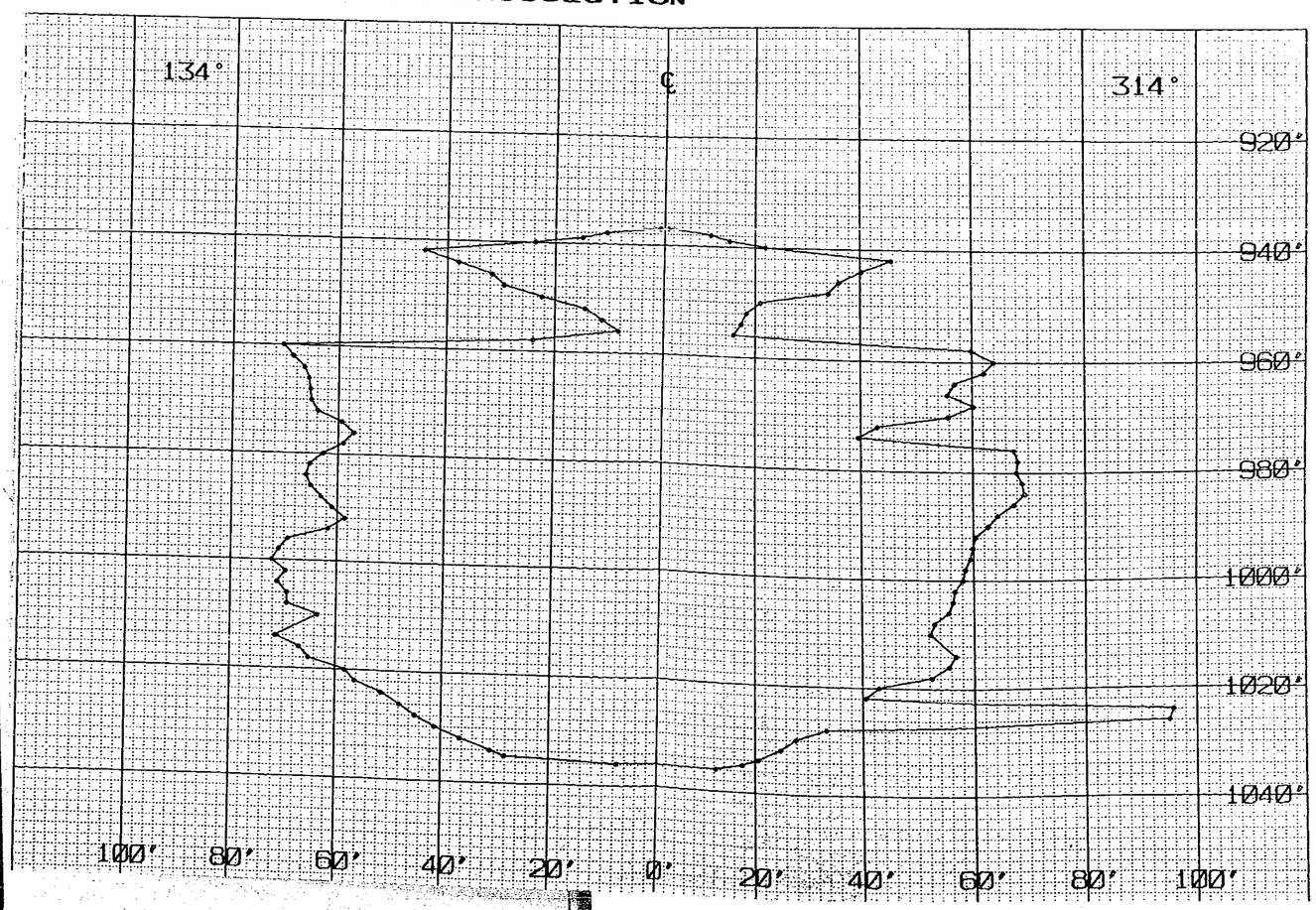
VERTICAL CROSSECTION



VERTICAL CROSSECTION



VERTICAL CROSSECTION



SONARWIRE

INC.

SONARWIRE, INC.
P. O. BOX 576
ABITA SPRINGS, LA. 70420
(504) 893-9221

Survey conducted by: Gary McCool

FERRELLGAS
HOLBROOK, AZ.
STORAGE WELL NO. 5
MARCH 3, 1995
SONAR-THRU-PIPE SURVEY

file 606

MAR 1995
ARIZONA GEOLOGICAL SURVEY

Sonar from 938 ft. to 1035 ft.
Sonar T.D. at 1037 ft.
9 5/8 inch cemented casing at 936 ft.
7 inch intermediate pipe at 947 ft.
4 1/2 inch tubing at 1034 ft.
Zero sonar tool at B.H.F.
Site personnel: Mr. Dale Thompson

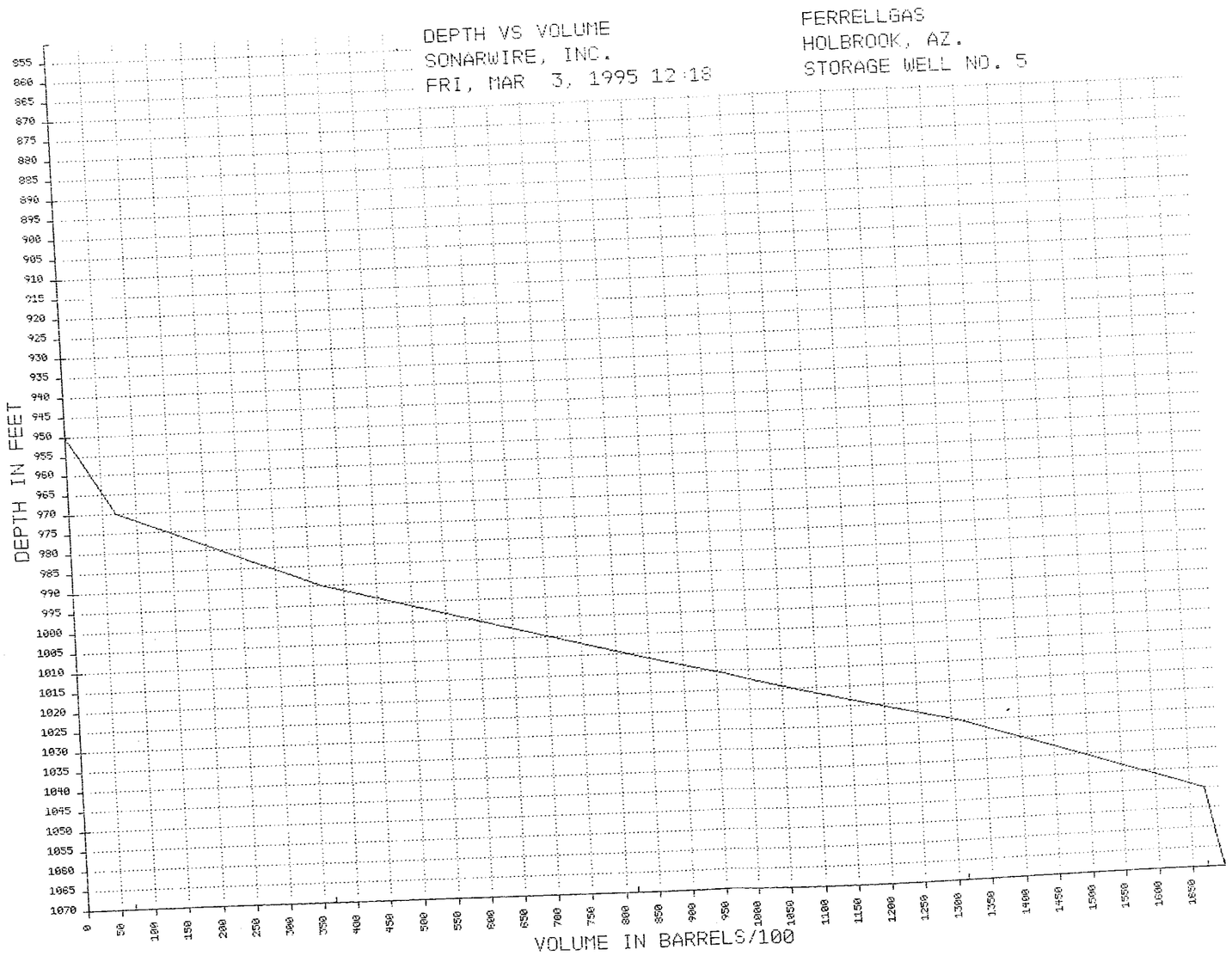
VOLUME (in Barrels) VERSUS DEPTH (in feet)

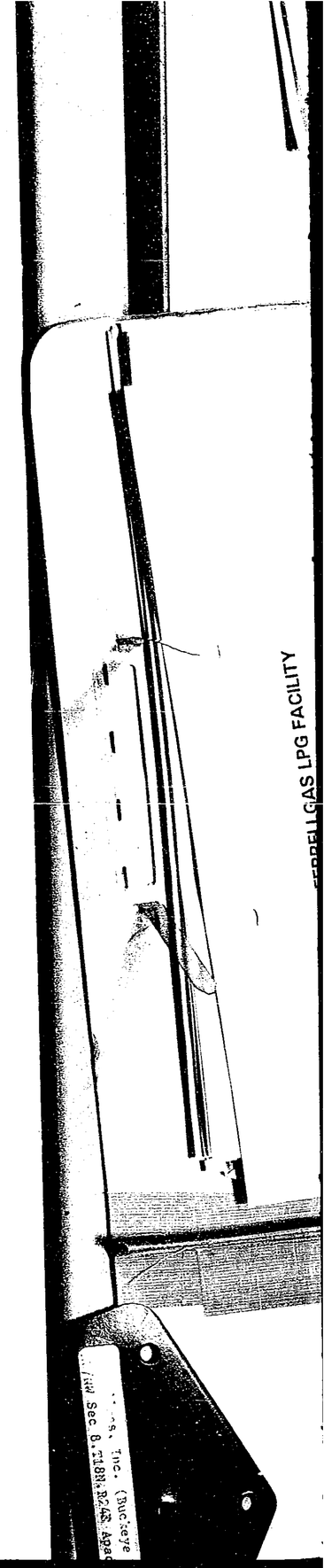
Sonarwire, Inc.
FERRELLGAS
STORAGE WELL NO. 5 \HOLBROOK, AZ.
Fri, Mar 3, 1995 12:18

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 938 | 46.4 | 46.4 |
| 939 | 203.6 | 250.0 |
| 940 | 357.5 | 607.5 |
| 941 | 568.4 | 1175.9 |
| 942 | 890.4 | 2066.3 |
| 943 | 982.1 | 3048.4 |
| 944 | 806.3 | 3854.7 |
| 945 | 696.1 | 4550.9 |
| 946 | 640.9 | 5191.8 |
| 947 | 587.1 | 5778.9 |
| 948 | 533.9 | 6312.8 |
| 949 | 435.0 | 6747.8 |
| 950 | 305.2 | 7052.9 |
| 951 | 222.8 | 7275.7 |
| 952 | 175.1 | 7450.7 |
| 953 | 142.1 | 7592.8 |
| 954 | 120.8 | 7713.6 |
| 955 | 135.5 | 7849.1 |
| 956 | 194.6 | 8043.7 |
| 957 | 579.4 | 8623.1 |
| 958 | 1666.0 | 10289.1 |
| 959 | 2417.4 | 12706.5 |
| 960 | 2449.0 | 15155.5 |
| 961 | 2387.5 | 17543.1 |
| 962 | 2239.4 | 19782.5 |
| 963 | 2153.4 | 21935.9 |
| 964 | 2126.9 | 24062.7 |
| 965 | 2103.5 | 26166.3 |
| 966 | 2081.2 | 28247.5 |
| 967 | 2086.6 | 30334.1 |
| 968 | 2119.9 | 32454.0 |
| 969 | 2124.6 | 34578.5 |
| 970 | 2098.9 | 36677.4 |
| 971 | 2060.1 | 38737.6 |
| 972 | 2008.9 | 40746.5 |
| 973 | 1928.1 | 42674.6 |
| 974 | 1823.8 | 44498.4 |
| 975 | 1857.0 | 46355.4 |
| 976 | 2044.4 | 48399.8 |
| 977 | 2193.8 | 50593.5 |

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 978 | 2283.1 | 52876.7 |
| 979 | 2355.7 | 55232.3 |
| 980 | 2409.7 | 57642.0 |
| 981 | 2445.0 | 60087.0 |
| 982 | 2461.9 | 62548.9 |
| 983 | 2465.6 | 65014.4 |
| 984 | 2456.0 | 67470.4 |
| 985 | 2442.6 | 69913.0 |
| 986 | 2426.2 | 72339.3 |
| 987 | 2409.2 | 74748.4 |
| 988 | 2392.7 | 77141.1 |
| 989 | 2354.3 | 79495.5 |
| 990 | 2292.7 | 81788.1 |
| 991 | 2279.7 | 84067.8 |
| 992 | 2320.1 | 86387.9 |
| 993 | 2389.3 | 88777.2 |
| 994 | 2487.6 | 91264.8 |
| 995 | 2560.0 | 93824.8 |
| 996 | 2601.6 | 96426.4 |
| 997 | 2631.9 | 99058.3 |
| 998 | 2650.7 | 101709.0 |
| 999 | 2633.0 | 104342.0 |
| 1000 | 2579.5 | 106921.5 |
| 1001 | 2536.2 | 109457.7 |
| 1002 | 2502.3 | 111960.0 |
| 1003 | 2478.3 | 114438.3 |
| 1004 | 2465.4 | 116903.7 |
| 1005 | 2435.5 | 119339.2 |
| 1006 | 2387.2 | 121726.3 |
| 1007 | 2365.4 | 124091.7 |
| 1008 | 2371.0 | 126462.7 |
| 1009 | 2428.0 | 128890.6 |
| 1010 | 2539.5 | 131430.1 |
| 1011 | 2569.1 | 133999.2 |
| 1012 | 2515.9 | 136515.1 |
| 1013 | 2439.7 | 138954.8 |
| 1014 | 2339.4 | 141294.2 |
| 1015 | 2224.4 | 143518.6 |
| 1016 | 2096.7 | 145615.3 |
| 1017 | 1967.0 | 147582.2 |
| 1018 | 1834.8 | 149417.0 |
| 1019 | 1699.6 | 151116.7 |
| 1020 | 1563.0 | 152679.6 |
| 1021 | 1534.4 | 154214.0 |
| 1022 | 1675.3 | 155889.3 |
| 1023 | 1790.3 | 157679.6 |
| 1024 | 1842.2 | 159521.8 |
| 1025 | 1792.3 | 161314.0 |
| 1026 | 1635.8 | 162949.8 |
| 1027 | 1391.0 | 164340.8 |

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 1028 | 1106.2 | 165447.0 |
| 1029 | 917.2 | 166364.2 |
| 1030 | 767.8 | 167132.0 |
| 1031 | 631.1 | 167763.1 |
| 1032 | 513.1 | 168276.2 |
| 1033 | 442.0 | 168718.2 |
| 1034 | 397.2 | 169115.4 |
| 1035 | 320.6 | 169436.1 |
| 1036 | 156.5 | 169592.6 |
| 1037 | 22.0 | 169614.7 |


DEPTH VS VOLUME
SONARWIRE, INC.
FRI, MAR 3, 1995 12:18
FERRELLGAS
HOLBROOK, AZ.
STORAGE WELL NO. 5
DEPTH IN FEET
VOLUME IN BARRELS/100


FERRELLGAS LPG FACILITY

VOLUME (in Cubic Feet) VERSUS DEPTH (in feet)

Sonarwire, Inc.
FERRELLGAS
STORAGE WELL NO. 5 \HOLBROOK, AZ.
Fri, Mar 3, 1995 12:18

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 938 | 260.8 | 260.8 |
| 939 | 1143.0 | 1403.7 |
| 940 | 2007.3 | 3411.0 |
| 941 | 3191.1 | 6602.1 |
| 942 | 4999.3 | 11601.4 |
| 943 | 5514.0 | 17115.4 |
| 944 | 4527.3 | 21642.7 |
| 945 | 3908.5 | 25551.2 |
| 946 | 3598.5 | 29149.7 |
| 947 | 3296.3 | 32445.9 |
| 948 | 2997.7 | 35443.6 |
| 949 | 2442.2 | 37885.8 |
| 950 | 1713.4 | 39599.2 |
| 951 | 1250.6 | 40849.9 |
| 952 | 982.9 | 41832.8 |
| 953 | 797.8 | 42630.6 |
| 954 | 678.2 | 43308.8 |
| 955 | 760.7 | 44069.5 |
| 956 | 1092.4 | 45161.8 |
| 957 | 3253.1 | 48414.9 |
| 958 | 9353.8 | 57768.8 |
| 959 | 13572.8 | 71341.6 |
| 960 | 13750.4 | 85091.9 |
| 961 | 13405.0 | 98496.9 |
| 962 | 12573.5 | 111070.4 |
| 963 | 12090.4 | 123160.8 |
| 964 | 11941.4 | 135102.2 |
| 965 | 11810.3 | 146912.5 |
| 966 | 11685.3 | 158597.8 |
| 967 | 11715.5 | 170313.3 |
| 968 | 11902.1 | 182215.4 |
| 969 | 11928.6 | 194144.0 |
| 970 | 11784.5 | 205928.5 |
| 971 | 11566.7 | 217495.2 |
| 972 | 11279.0 | 228774.3 |
| 973 | 10825.6 | 239599.9 |
| 974 | 10239.7 | 249839.6 |
| 975 | 10426.3 | 260265.9 |
| 976 | 11478.4 | 271744.3 |
| 977 | 12317.2 | 284061.5 |

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 978 | 12818.7 | 296880.2 |
| 979 | 13226.0 | 310106.3 |
| 980 | 13529.3 | 323635.5 |
| 981 | 13727.9 | 337363.4 |
| 982 | 13822.3 | 351185.7 |
| 983 | 13843.1 | 365028.8 |
| 984 | 13789.2 | 378818.0 |
| 985 | 13714.4 | 392532.4 |
| 986 | 13622.2 | 406154.7 |
| 987 | 13526.5 | 419681.2 |
| 988 | 13433.9 | 433115.1 |
| 989 | 13218.6 | 446333.7 |
| 990 | 12872.4 | 459206.0 |
| 991 | 12799.4 | 472005.4 |
| 992 | 13026.4 | 485031.7 |
| 993 | 13415.0 | 498446.7 |
| 994 | 13966.8 | 512413.5 |
| 995 | 14373.6 | 526787.1 |
| 996 | 14606.8 | 541393.8 |
| 997 | 14777.0 | 556170.8 |
| 998 | 14882.5 | 571053.3 |
| 999 | 14783.2 | 585836.5 |
| 1000 | 14482.9 | 600319.4 |
| 1001 | 14239.6 | 614559.0 |
| 1002 | 14049.3 | 628608.3 |
| 1003 | 13914.5 | 642522.8 |
| 1004 | 13842.4 | 656365.3 |
| 1005 | 13674.0 | 670039.3 |
| 1006 | 13402.9 | 683442.2 |
| 1007 | 13280.5 | 696722.7 |
| 1008 | 13312.1 | 710034.8 |
| 1009 | 13632.2 | 723666.9 |
| 1010 | 14258.0 | 737924.9 |
| 1011 | 14424.4 | 752349.4 |
| 1012 | 14125.7 | 766475.1 |
| 1013 | 13697.9 | 780173.0 |
| 1014 | 13134.8 | 793307.8 |
| 1015 | 12488.8 | 805796.6 |
| 1016 | 11771.9 | 817568.5 |
| 1017 | 11043.7 | 828612.3 |
| 1018 | 10301.8 | 838914.0 |
| 1019 | 9542.7 | 848456.7 |
| 1020 | 8775.3 | 857232.0 |
| 1021 | 8614.9 | 865846.9 |
| 1022 | 9405.9 | 875252.8 |
| 1023 | 10051.8 | 885304.6 |
| 1024 | 10343.2 | 895647.8 |
| 1025 | 10062.9 | 905710.6 |
| 1026 | 9184.1 | 914894.7 |
| 1027 | 7810.0 | 922704.8 |

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 1028 | 6210.6 | 928915.3 |
| 1029 | 5149.7 | 934065.1 |
| 1030 | 4311.1 | 938376.1 |
| 1031 | 3543.1 | 941919.3 |
| 1032 | 2881.0 | 944800.3 |
| 1033 | 2481.8 | 947282.1 |
| 1034 | 2230.0 | 949512.1 |
| 1035 | 1800.3 | 951312.3 |
| 1036 | 879.0 | 952191.3 |
| 1037 | 123.8 | 952315.0 |

MAX RANGE VS BEARING
SONARWIRE, INC.
FRI, MAR 3, 1995 12:18

FERRELLGAS
HOLBROOK, AZ.
STORAGE WELL NO. 5

MAXIMUM RADIUS and DEPTH VS BEARING SONARWIRE, INC.
FERRELLGAS Fri, Mar 3, 1995 12:18
STORAGE WELL NO. 5 HOLBROOK, AZ.

This table lists the maximum radius (in feet) found at each of the 128 bearings at which soundings were taken. Also listed, after each radius, (separated by ':'), is the depth (in feet) at which that maximum radius was found. Bearings are shown, (in degrees), for each row of four 'radius : depth' pairs.

| Bearing | +0.0 | +2.8 | +5.6 | +8.4 |
|---|---|---|---|---|
| 0.0 | 95 : 1024 | 97 : 1024 | 73 : 998 | 73 : 998 |
| 11.3 | 73 : 998 | 73 : 1010 | 74 : 1010 | 73 : 1010 |
| 22.5 | 73 : 1010 | 73 : 998 | 72 : 998 | 72 : 994 |
| 33.8 | 71 : 994 | 71 : 998 | 70 : 996 | 72 : 1012 |
| 45.0 | 71 : 998 | 71 : 992 | 72 : 1012 | 73 : 1012 |
| 56.3 | 75 : 1012 | 75 : 1012 | 73 : 1012 | 72 : 1012 |
| 67.5 | 73 : 1014 | 73 : 1012 | 73 : 1012 | 75 : 1010 |
| 78.8 | 75 : 1010 | 75 : 1010 | 74 : 1010 | 74 : 1010 |
| 90.0 | 74 : 1010 | 75 : 1010 | 75 : 1010 | 75 : 1010 |
| 101.3 | 75 : 1010 | 75 : 1010 | 75 : 1010 | 75 : 1010 |
| 112.5 | 75 : 1010 | 76 : 1010 | 75 : 1010 | 75 : 1010 |
| 123.8 | 75 : 1010 | 75 : 1010 | 75 : 1010 | 75 : 1010 |
| 135.0 | 75 : 1010 | 74 : 1010 | 75 : 1010 | 75 : 1010 |
| 146.3 | 75 : 1010 | 75 : 1010 | 75 : 1010 | 74 : 1010 |
| 157.5 | 74 : 1010 | 73 : 1010 | 73 : 1010 | 74 : 1010 |
| 168.8 | 75 : 1010 | 73 : 1010 | 73 : 1010 | 73 : 960 |
| 180.0 | 73 : 1010 | 72 : 958 | 73 : 1010 | 72 : 960 |
| 191.3 | 72 : 1010 | 72 : 958 | 72 : 958 | 72 : 958 |
| 202.5 | 71 : 958 | 71 : 1012 | 71 : 958 | 71 : 958 |
| 213.8 | 71 : 992 | 71 : 1010 | 70 : 1010 | 71 : 1010 |
| 225.0 | 71 : 1010 | 69 : 992 | 69 : 992 | 69 : 992 |
| 236.3 | 68 : 982 | 68 : 982 | 69 : 1010 | 70 : 1010 |
| 247.5 | 71 : 1010 | 70 : 1010 | 70 : 1010 | 70 : 1010 |
| 258.8 | 70 : 1010 | 69 : 1012 | 68 : 970 | 68 : 960 |
| 270.0 | 68 : 970 | 68 : 970 | 68 : 982 | 68 : 958 |
| 281.3 | 68 : 982 | 68 : 960 | 69 : 984 | 70 : 984 |
| 292.5 | 69 : 984 | 68 : 984 | 69 : 988 | 70 : 996 |
| 303.8 | 70 : 996 | 96 : 1024 | 96 : 1024 | 96 : 1024 |
| 315.0 | 98 : 1026 | 99 : 1026 | 101 : 1026 | 101 : 1026 |
| 326.3 | 101 : 1026 | 100 : 1026 | 98 : 1024 | 99 : 1024 |
| 337.5 | 99 : 1024 | 97 : 1024 | 95 : 1026 | 95 : 1026 |
| 348.8 | 94 : 1026 | 94 : 1024 | 95 : 1024 | 95 : 1024 |

Between 937 and 1035 foot depths, maximum radius was 101 feet at bearing 323.4 at 1026 foot depth.

Wall Ranges versus Depth
Sonarwire, Inc.
FERRELLGAS
STORAGE WELL NO. 5
Fri, Mar 3, 1995 12:18
HOLBROOK, AZ.

| Depth | N | NE | E | SE | S | SW | W | NW |
|---|---|---|---|---|---|---|---|---|
| 937 | 0.8 | 0.9 | 1.0 | 1.0 | 1.5 | 1.4 | 0.8 | 0.8 |
| 938 | 15.7 | 15.4 | 15.9 | 15.4 | 16.2 | 15.7 | 13.8 | 15.6 |
| 939 | 23.5 | 22.9 | 22.2 | 22.3 | 24.5 | 22.3 | 22.3 | 22.6 |
| 940 | 29.2 | 25.5 | 24.5 | 26.7 | 31.0 | 29.7 | 27.5 | 27.7 |
| 942 | 38.2 | 39.7 | 45.3 | 45.3 | 46.5 | 46.8 | 45.8 | 44.3 |
| 944 | 36.5 | 33.2 | 36.5 | 36.7 | 34.0 | 39.0 | 36.5 | 34.7 |
| 946 | 32.5 | 30.2 | 36.5 | 31.2 | 37.2 | 35.5 | 29.7 | 33.0 |
| 948 | 27.0 | 30.6 | 30.4 | 27.9 | 36.5 | 29.6 | 28.3 | 30.4 |
| 950 | 21.2 | 23.3 | 16.1 | 19.5 | 28.7 | 18.0 | 19.5 | 19.1 |
| 952 | 17.0 | 18.7 | 13.0 | 13.6 | 22.2 | 13.2 | 17.2 | 15.3 |
| 954 | 14.7 | 17.2 | 10.5 | 10.1 | 17.6 | 9.9 | 15.5 | 13.6 |
| 956 | 19.5 | 20.3 | 21.6 | 21.8 | 22.6 | 19.3 | 16.1 | 19.5 |
| 958 | 59.6 | 63.0 | 57.0 | 69.4 | 72.5 | 66.8 | 66.8 | 62.6 |
| 960 | 62.9 | 64.2 | 63.7 | 69.6 | 72.5 | 64.6 | 66.7 | 63.7 |
| 962 | 60.4 | 53.7 | 66.7 | 65.8 | 66.7 | 66.2 | 59.1 | 61.2 |
| 964 | 54.9 | 63.3 | 64.2 | 65.0 | 66.2 | 60.4 | 60.8 | 60.4 |
| 966 | 47.4 | 57.9 | 58.7 | 66.2 | 65.4 | 63.3 | 66.7 | 63.3 |
| 968 | 44.4 | 54.9 | 66.7 | 66.2 | 65.8 | 63.3 | 66.2 | 66.2 |
| 970 | 43.2 | 53.7 | 66.2 | 66.2 | 60.8 | 62.9 | 67.9 | 67.5 |
| 972 | 38.6 | 49.9 | 66.7 | 62.5 | 53.3 | 60.8 | 64.2 | 67.5 |
| 974 | 38.6 | 51.2 | 65.4 | 61.2 | 57.9 | 57.0 | 61.6 | 59.1 |
| 976 | 65.0 | 62.1 | 60.4 | 65.0 | 62.9 | 59.1 | 62.9 | 65.4 |
| 978 | 67.9 | 67.1 | 63.3 | 62.5 | 65.0 | 63.7 | 60.8 | 67.5 |
| 980 | 68.8 | 67.9 | 66.7 | 63.7 | 67.1 | 65.4 | 63.7 | 65.8 |
| 982 | 67.9 | 66.7 | 65.4 | 64.2 | 66.2 | 69.2 | 65.8 | 67.5 |
| 984 | 69.2 | 67.9 | 65.0 | 65.4 | 62.5 | 64.6 | 66.2 | 67.9 |
| 986 | 68.3 | 69.2 | 68.3 | 64.2 | 65.0 | 62.9 | 62.1 | 65.4 |
| 988 | 70.0 | 69.2 | 62.1 | 63.3 | 69.2 | 61.2 | 64.6 | 67.5 |
| 990 | 69.6 | 68.8 | 59.1 | 57.0 | 69.2 | 60.0 | 60.8 | 67.1 |
| 992 | 63.3 | 70.4 | 68.3 | 65.0 | 69.2 | 67.9 | 65.0 | 58.7 |
| 994 | 71.3 | 68.8 | 68.8 | 69.6 | 66.7 | 66.7 | 60.4 | 65.8 |
| 996 | 70.4 | 70.9 | 70.4 | 69.6 | 68.3 | 65.0 | 62.5 | 68.3 |
| 998 | 71.7 | 71.3 | 70.9 | 71.7 | 68.8 | 67.5 | 60.8 | 67.1 |
| 1000 | 70.4 | 69.2 | 70.0 | 70.9 | 69.6 | 67.9 | 55.8 | 65.8 |
| 1002 | 69.6 | 68.3 | 69.6 | 70.4 | 67.5 | 65.4 | 57.4 | 67.1 |
| 1004 | 70.9 | 68.8 | 69.2 | 68.8 | 68.3 | 66.7 | 58.7 | 54.1 |
| 1006 | 69.2 | 68.3 | 67.5 | 65.4 | 68.3 | 66.2 | 56.2 | 53.7 |
| 1008 | 70.4 | 65.4 | 68.8 | 70.9 | 71.3 | 65.0 | 53.7 | 52.0 |
| 1010 | 69.6 | 67.5 | 74.2 | 74.6 | 73.4 | 70.9 | 62.5 | 51.2 |
| 1012 | 63.3 | 71.3 | 73.0 | 72.5 | 71.3 | 70.0 | 64.2 | 47.8 |
| 1014 | 61.6 | 70.4 | 70.0 | 70.0 | 66.2 | 59.1 | 59.5 | 44.9 |
| 1016 | 58.7 | 60.4 | 67.9 | 71.7 | 62.1 | 58.7 | 60.0 | 34.8 |
| 1018 | 55.8 | 57.4 | 66.7 | 61.6 | 57.4 | 53.7 | 55.3 | 30.2 |

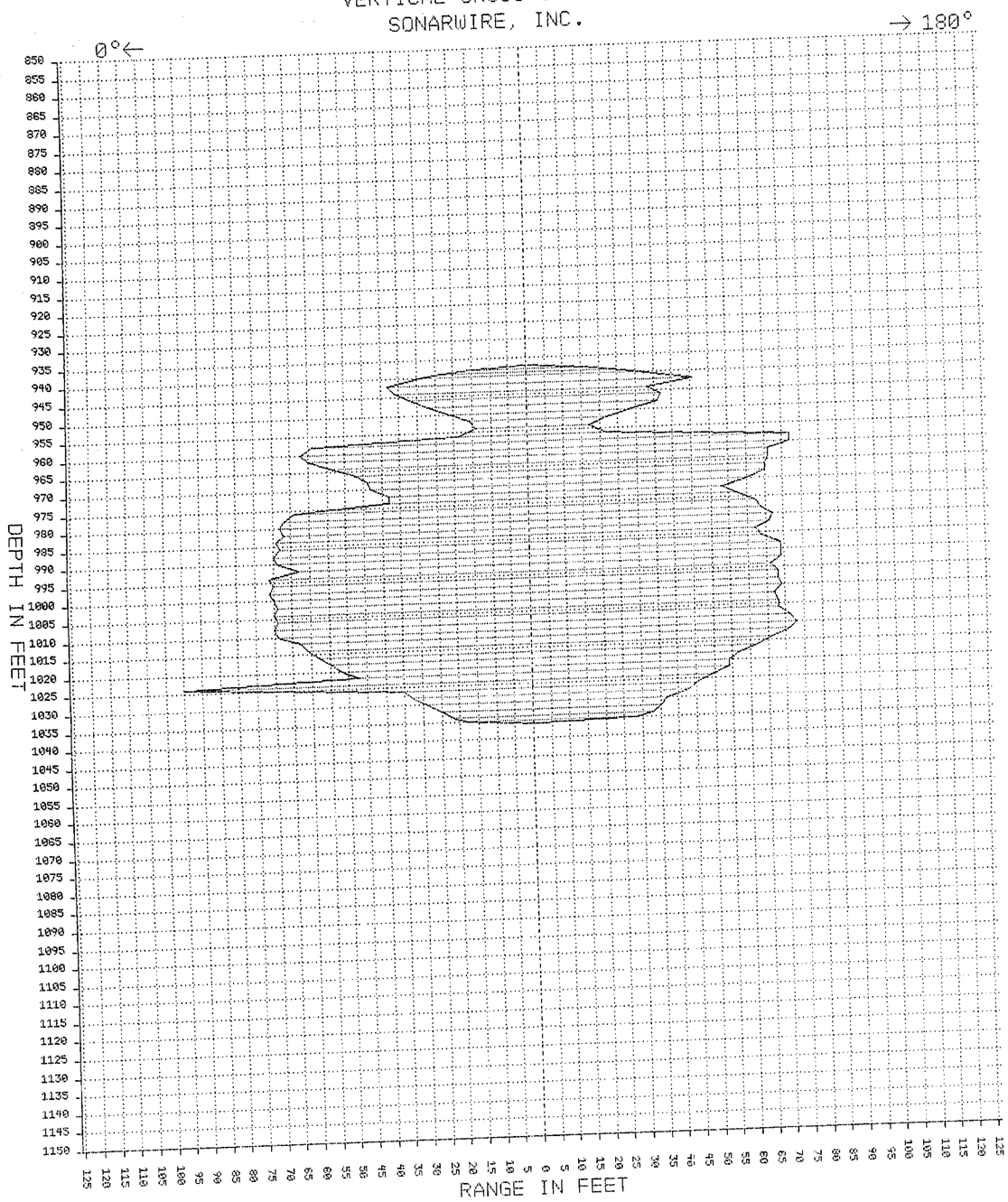
| Depth | N | NE | E | SE | S | SW | W | NW |
|---|---|---|---|---|---|---|---|---|
| 1020 | 52.8 | 53.7 | 59.1 | 58.3 | 54.5 | 52.4 | 49.9 | 28.9 |
| 1022 | 47.4 | 49.1 | 51.6 | 52.0 | 54.5 | 50.7 | 47.4 | 47.0 |
| 1024 | 95.2 | 46.1 | 49.1 | 49.1 | 49.6 | 48.6 | 42.0 | 95.7 |
| 1026 | 35.4 | 38.5 | 45.0 | 45.6 | 45.0 | 43.0 | 38.5 | 97.7 |
| 1028 | 33.4 | 30.9 | 38.0 | 41.0 | 43.5 | 38.5 | 35.9 | 29.9 |
| 1030 | 29.4 | 28.9 | 35.9 | 35.9 | 38.0 | 36.9 | 31.9 | 25.8 |
| 1032 | 25.7 | 30.9 | 33.2 | 34.2 | 35.2 | 26.9 | 22.9 | 25.2 |
| 1034 | 22.4 | 27.4 | 28.2 | 32.2 | 34.0 | 21.9 | 19.1 | 18.1 |
| 1035 | 18.6 | 23.9 | 25.7 | 27.9 | 28.9 | 17.1 | 13.8 | 11.8 |

| Depth | Tilt | N | NE | E | SE | S | SW | W | NW |
|---|---|---|---|---|---|---|---|---|---|
| 1035 | -90 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |

FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 5
FRI, MAR 3, 1995 12:18

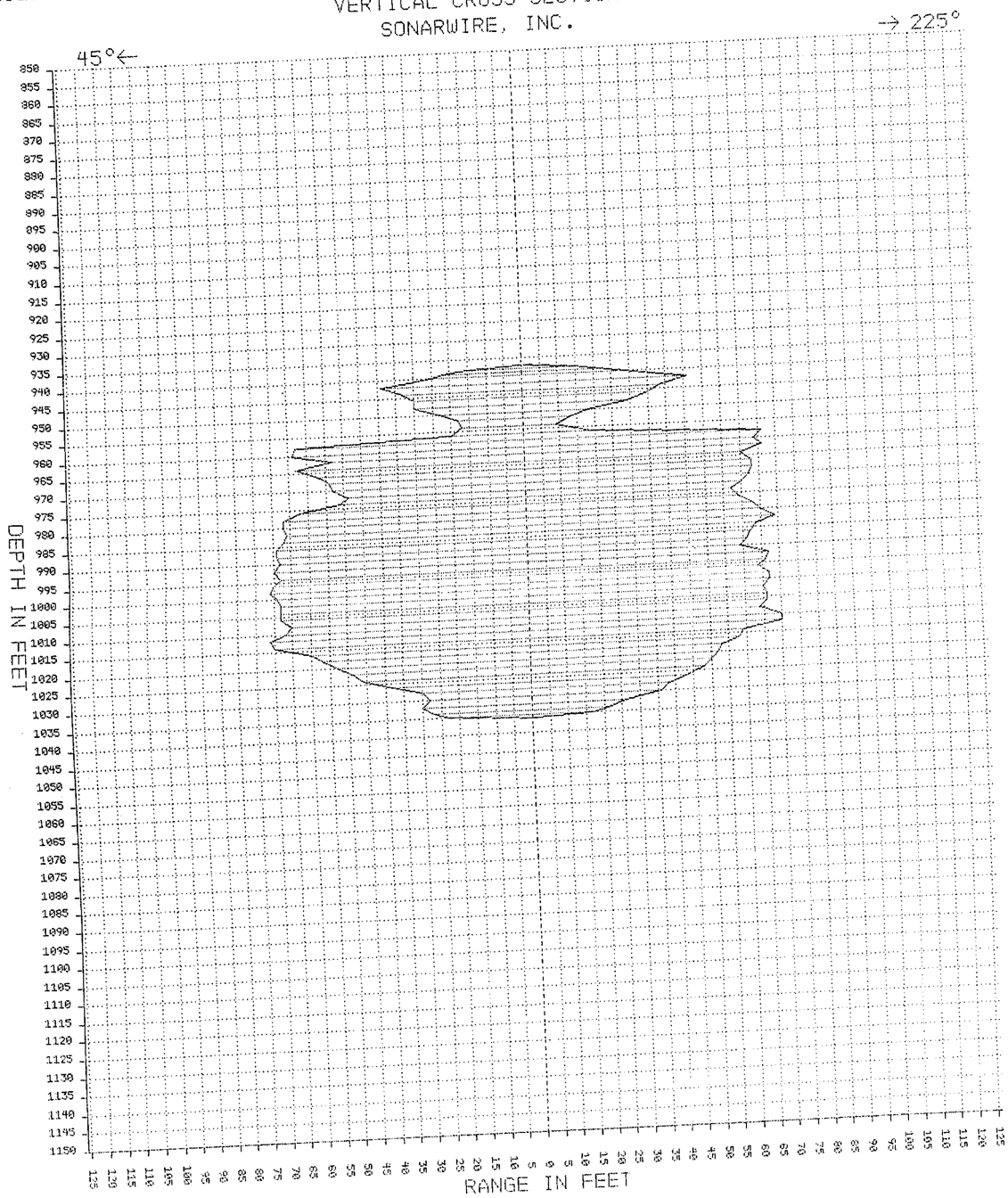
VERTICAL CROSS-SECTION
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 5
FRI, MAR 3, 1995 12:18

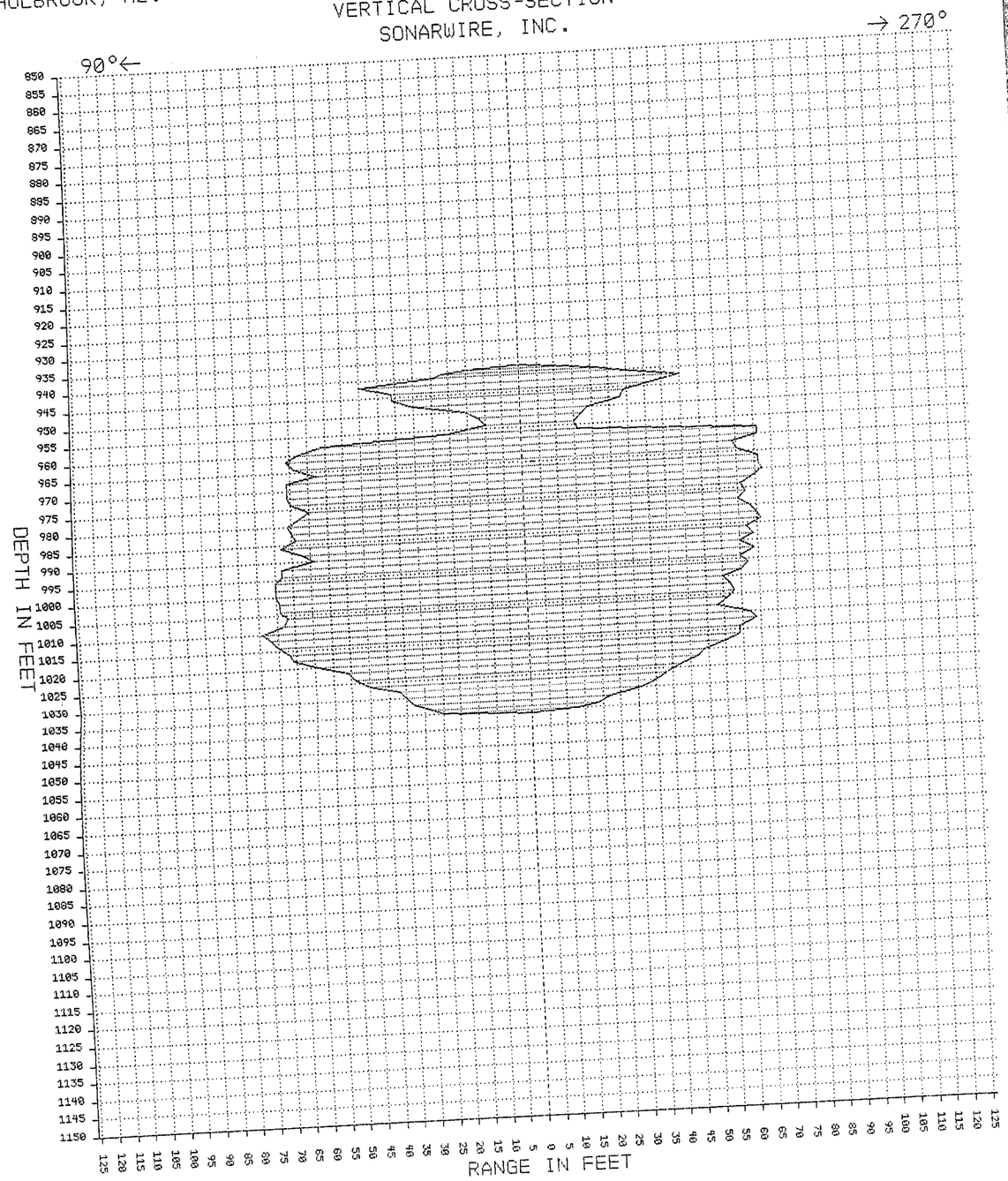
VERTICAL CROSS-SECTION
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 5
FRI, MAR 3, 1995 12:18

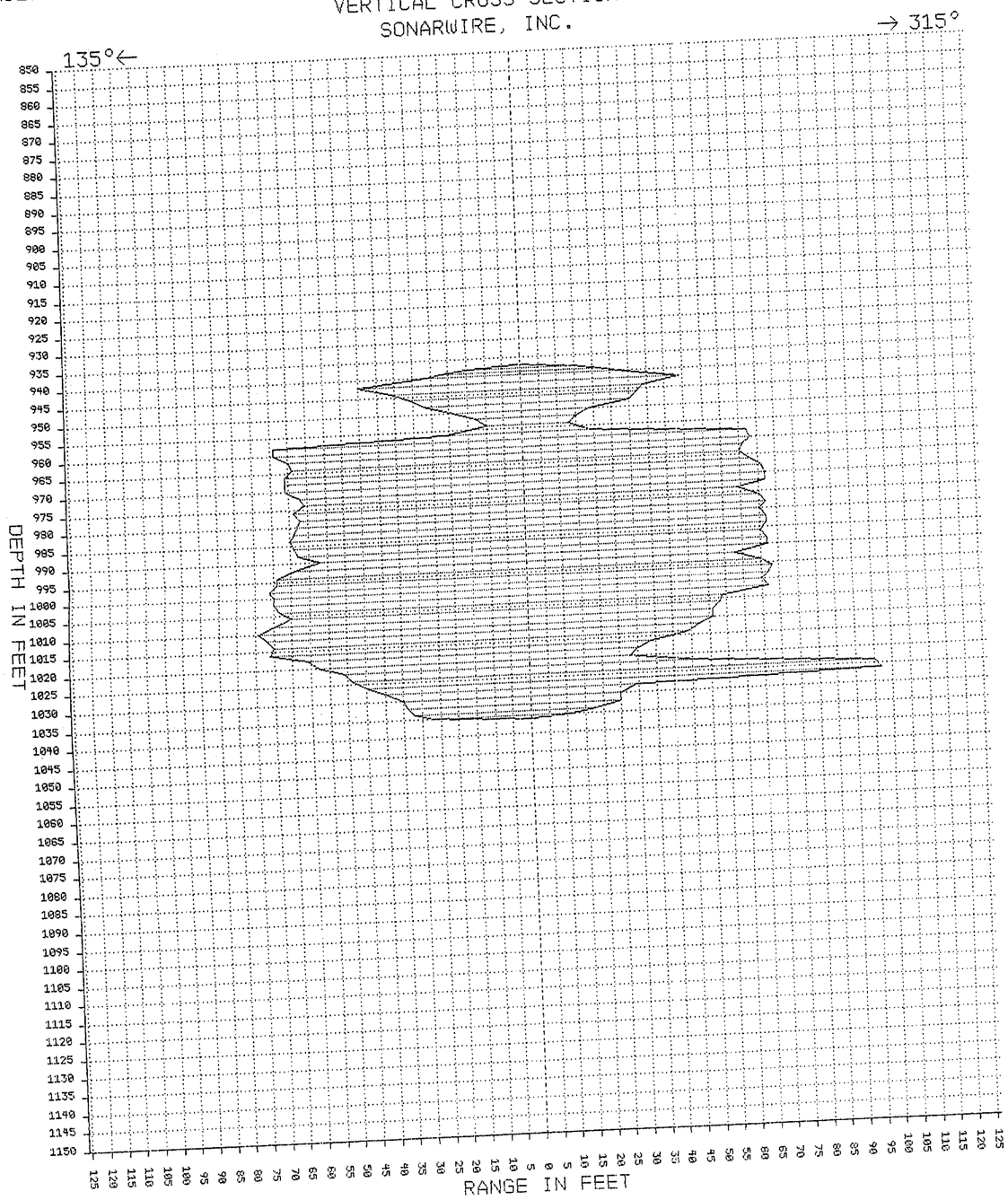
VERTICAL CROSS-SECTION
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 5
FRI, MAR 3, 1995 12:18

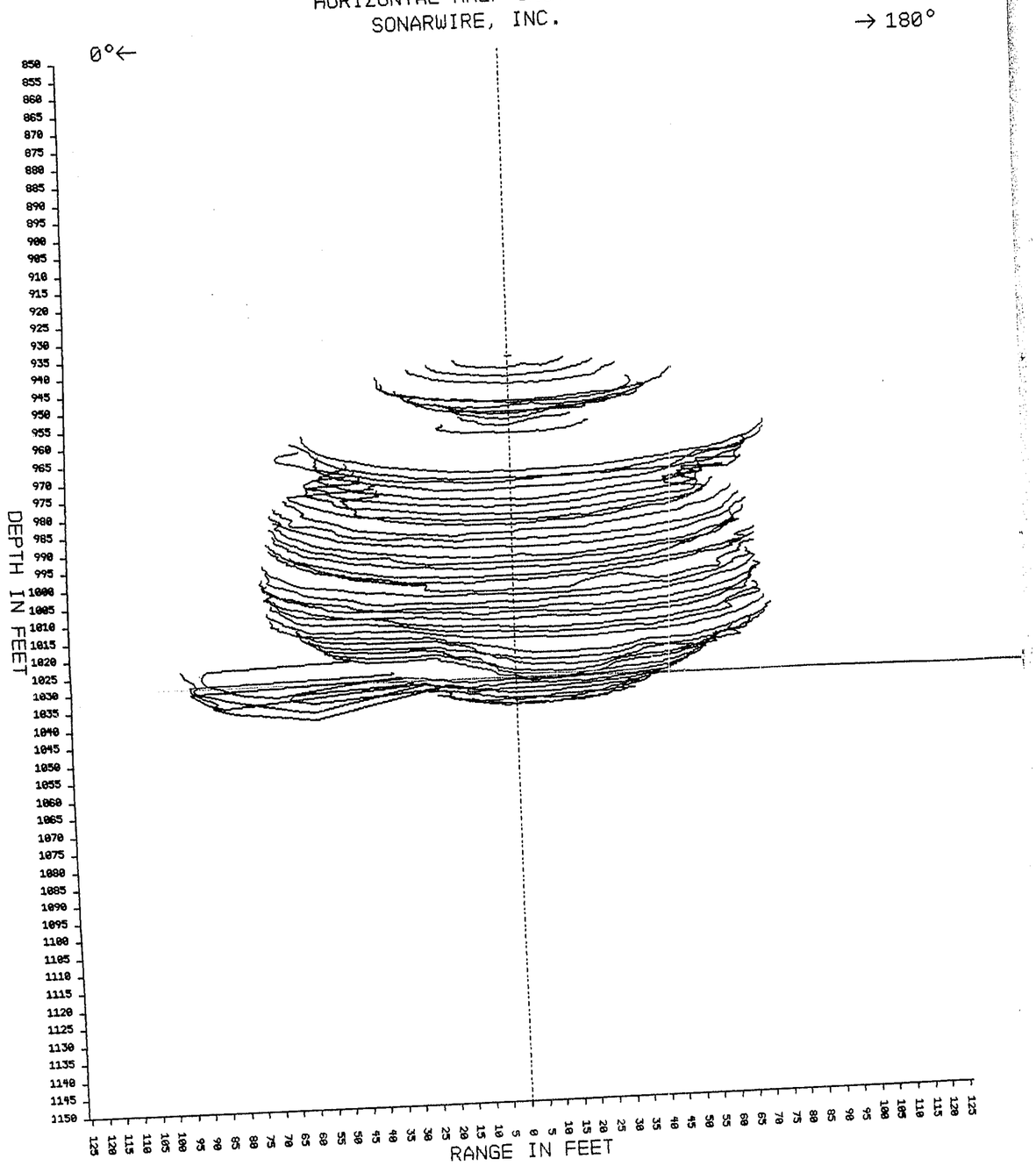
VERTICAL CROSS-SECTION
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 5
FRI, MAR 3, 1995 12:18

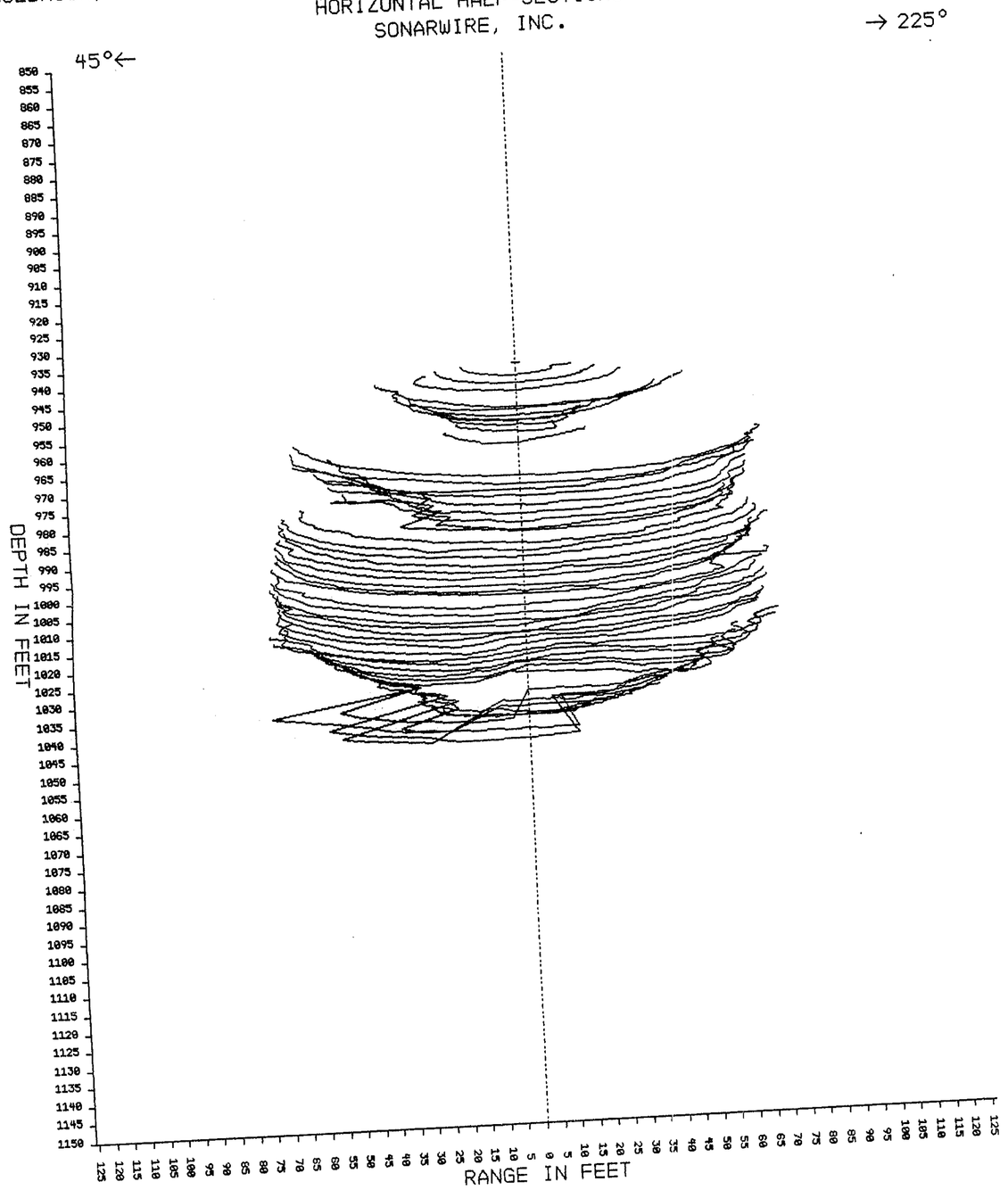
HORIZONTAL HALF-SECTIONS
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 5
FRI, MAR 3, 1995 12:18

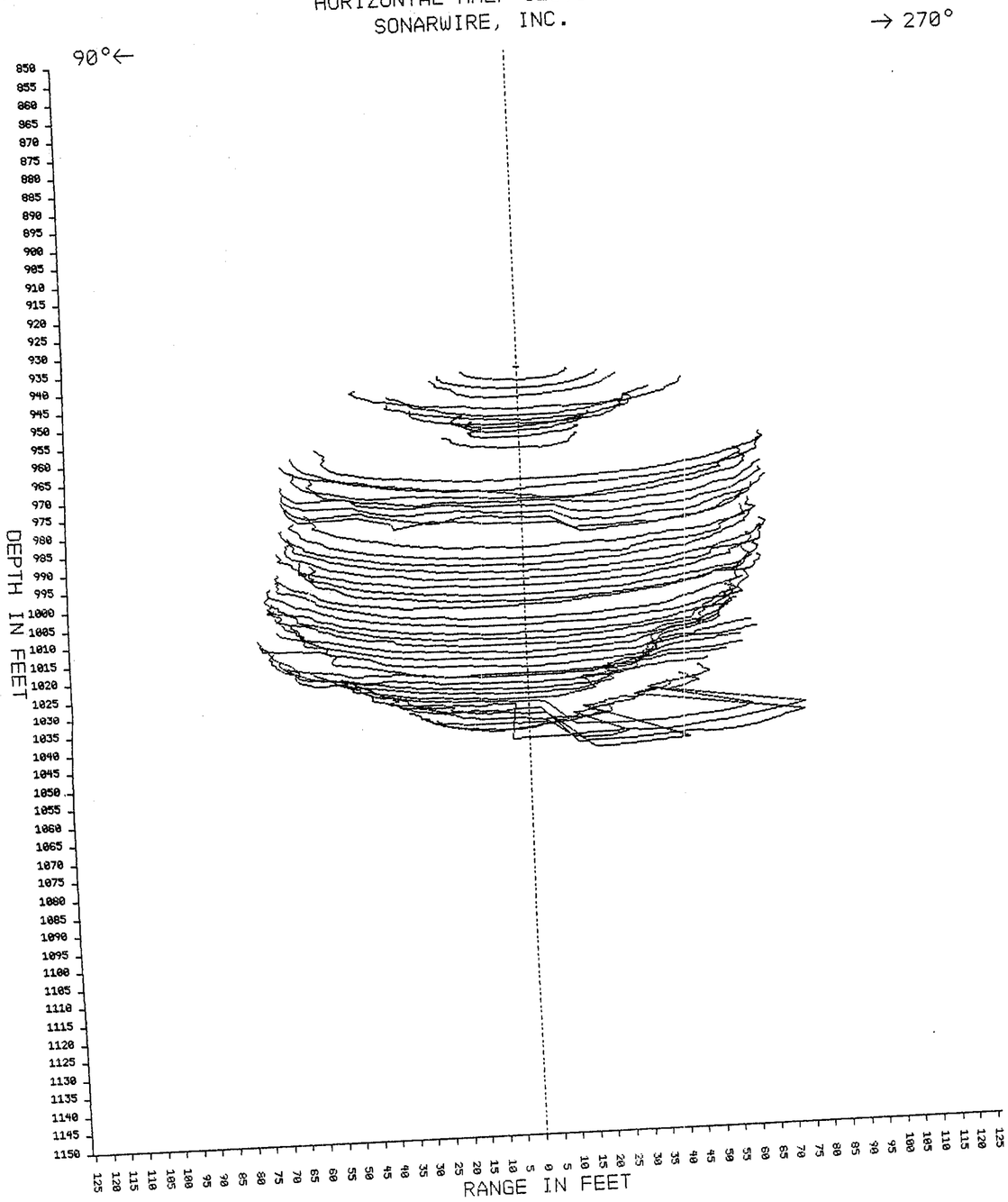
HORIZONTAL HALF-SECTIONS
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 5
FRI, MAR 3, 1995 12:18

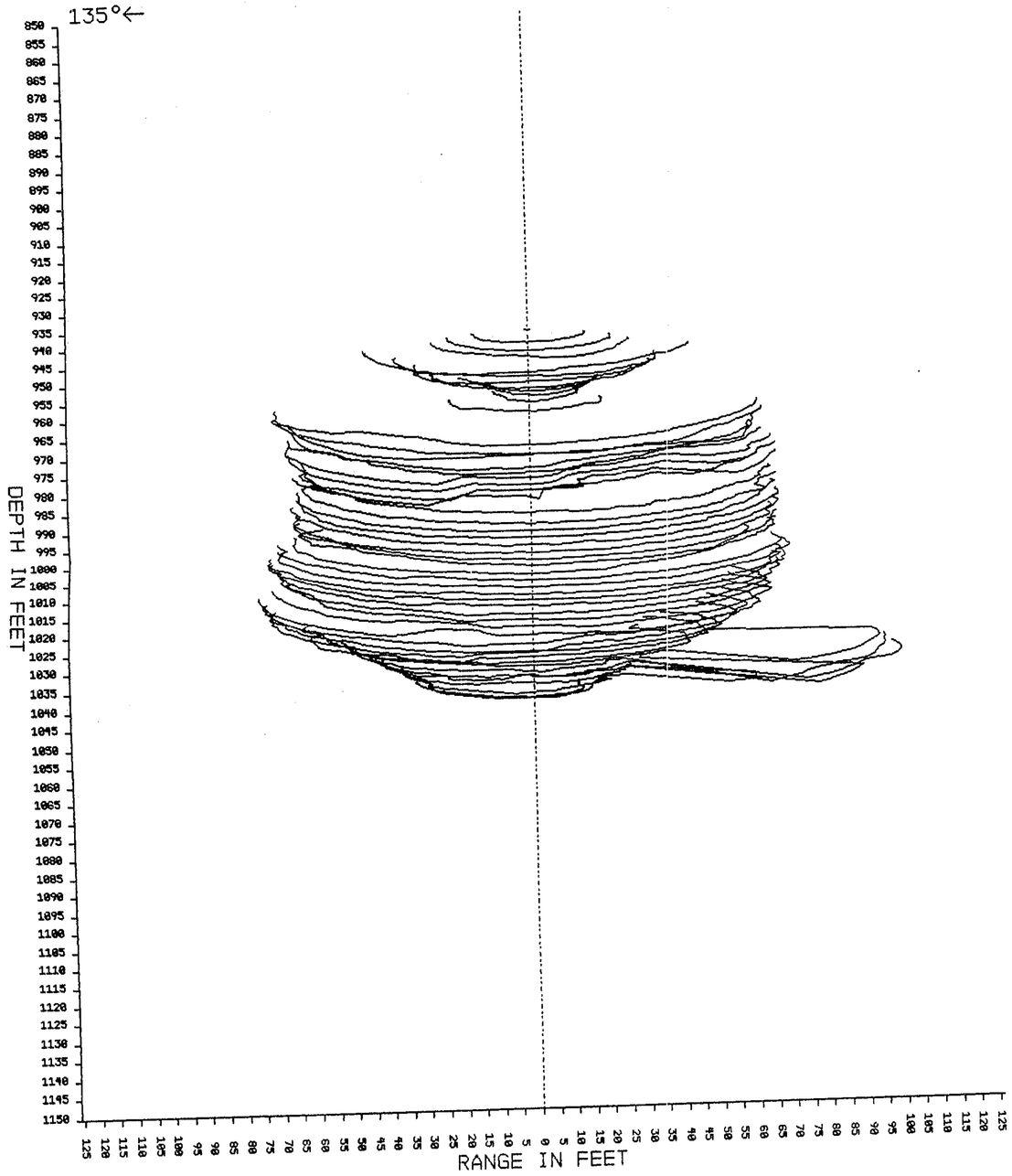
HORIZONTAL HALF-SECTIONS
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 5
FRI, MAR 3, 1995 12:18

HORIZONTAL HALF-SECTIONS
SONARWIRE, INC.



Wall Range versus Bearing and Depth
Sonarwire, Inc.
FERRELLGAS
STORAGE WELL NO. 5
Fri, Mar 3, 1995 12:18
HOLBROOK, AZ.

Depth: 937 Tilt: 0 Range: 24.8 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 22.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 |
| 45.0 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 1.0 | 1.0 |
| 67.5 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | 1.0 |
| 90.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 |
| 112.5 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 135.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.2 | 1.0 |
| 157.5 | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 | 1.4 | 1.4 | 1.4 |
| 180.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 202.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 |
| 225.0 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.2 | 1.2 |
| 247.5 | 1.0 | 1.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 270.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 292.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 315.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 337.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |

Depth: 938 Tilt: 0 Range: 24.8 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 15.7 | 15.6 | 15.4 | 15.5 | 15.5 | 15.6 | 15.6 | 15.6 |
| 22.5 | 15.6 | 15.4 | 15.5 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 |
| 45.0 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.4 | 15.7 |
| 67.5 | 15.7 | 15.3 | 15.6 | 15.5 | 15.6 | 15.5 | 15.6 | 15.5 |
| 90.0 | 15.9 | 16.0 | 16.0 | 16.2 | 15.8 | 15.5 | 15.5 | 15.6 |
| 112.5 | 15.5 | 15.4 | 15.3 | 15.2 | 15.1 | 15.0 | 15.1 | 15.3 |
| 135.0 | 15.4 | 15.6 | 15.6 | 15.8 | 15.9 | 16.1 | 16.1 | 15.9 |
| 157.5 | 15.8 | 16.2 | 16.2 | 16.2 | 16.1 | 16.2 | 16.2 | 16.1 |
| 180.0 | 16.2 | 16.2 | 16.2 | 16.1 | 15.8 | 15.6 | 15.5 | 15.7 |
| 202.5 | 15.8 | 15.7 | 15.5 | 15.4 | 15.1 | 15.2 | 15.4 | 15.7 |
| 225.0 | 15.7 | 15.8 | 15.9 | 14.5 | 13.4 | 12.2 | 11.3 | 11.2 |
| 247.5 | 11.1 | 11.2 | 11.4 | 12.0 | 12.4 | 13.1 | 13.4 | 13.6 |
| 270.0 | 13.8 | 13.8 | 13.8 | 14.0 | 14.0 | 14.0 | 14.2 | 14.2 |
| 292.5 | 14.4 | 14.4 | 14.5 | 14.6 | 14.8 | 15.0 | 15.3 | 15.5 |
| 315.0 | 15.6 | 15.7 | 15.8 | 16.1 | 16.1 | 16.1 | 16.1 | 16.0 |
| 337.5 | 15.9 | 15.8 | 15.8 | 15.6 | 15.6 | 15.8 | 15.8 | 15.6 |

Depth: 939 Tilt: 0 Range: 34.8 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 23.5 | 23.3 | 23.0 | 22.7 | 23.0 | 23.2 | 22.7 | 22.7 |
| 22.5 | 22.7 | 22.7 | 22.7 | 22.7 | 22.7 | 22.7 | 22.6 | 22.6 |
| 45.0 | 22.9 | 22.9 | 22.7 | 22.6 | 22.7 | 23.2 | 23.0 | 23.0 |
| 67.5 | 22.9 | 22.6 | 22.5 | 22.5 | 22.9 | 22.5 | 22.5 | 22.5 |
| 90.0 | 22.2 | 22.0 | 22.2 | 22.2 | 22.3 | 22.3 | 22.3 | 22.5 |
| 112.5 | 22.3 | 22.3 | 22.3 | 22.6 | 22.5 | 22.3 | 22.2 | 22.2 |
| 135.0 | 22.3 | 22.5 | 22.5 | 22.3 | 22.3 | 22.3 | 22.6 | 22.7 |
| 157.5 | 22.9 | 22.9 | 23.2 | 23.6 | 23.9 | 24.1 | 24.2 | 24.4 |
| 180.0 | 24.5 | 24.2 | 24.1 | 23.9 | 23.6 | 23.6 | 23.2 | 22.9 |
| 202.5 | 23.0 | 22.7 | 22.5 | 22.2 | 21.7 | 21.7 | 22.0 | 22.3 |
| 225.0 | 22.3 | 22.3 | 22.2 | 21.9 | 21.7 | 21.6 | 21.7 | 21.6 |
| 247.5 | 21.4 | 21.1 | 21.1 | 21.9 | 21.9 | 21.9 | 22.2 | 22.2 |
| 270.0 | 22.3 | 22.3 | 22.3 | 22.3 | 22.3 | 22.5 | 22.5 | 22.3 |
| 292.5 | 22.2 | 22.0 | 22.0 | 21.9 | 22.3 | 22.5 | 22.6 | 22.7 |
| 315.0 | 22.6 | 22.9 | 22.9 | 23.0 | 23.2 | 23.3 | 23.6 | 23.3 |
| 337.5 | 23.5 | 23.6 | 23.5 | 23.5 | 23.6 | 23.3 | 23.5 | 23.5 |

Depth: 940 Tilt: 0 Range: 39.7 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 29.2 | 29.2 | 29.5 | 30.2 | 30.4 | 30.2 | 30.7 | 30.9 |
| 22.5 | 30.7 | 30.5 | 29.9 | 29.4 | 28.7 | 28.0 | 27.2 | 26.3 |
| 45.0 | 25.5 | 24.8 | 24.2 | 23.8 | 23.8 | 23.8 | 24.2 | 24.5 |
| 67.5 | 24.8 | 24.5 | 24.2 | 23.8 | 23.8 | 23.8 | 24.2 | 24.3 |
| 90.0 | 24.5 | 24.8 | 25.2 | 25.5 | 25.8 | 26.0 | 26.3 | 26.3 |
| 112.5 | 26.5 | 26.5 | 26.5 | 26.5 | 26.5 | 26.7 | 26.7 | 26.7 |
| 135.0 | 26.7 | 26.8 | 26.8 | 26.8 | 27.3 | 27.3 | 27.8 | 28.5 |
| 157.5 | 29.0 | 29.5 | 29.9 | 30.2 | 30.7 | 31.0 | 31.4 | 31.4 |
| 180.0 | 31.0 | 31.0 | 30.7 | 30.2 | 29.2 | 28.7 | 28.7 | 28.5 |
| 202.5 | 29.2 | 29.0 | 29.4 | 29.9 | 30.5 | 31.4 | 31.0 | 30.4 |
| 225.0 | 29.7 | 29.2 | 29.0 | 28.8 | 28.8 | 28.8 | 28.8 | 28.8 |
| 247.5 | 28.7 | 28.7 | 28.7 | 28.2 | 28.2 | 27.7 | 27.5 | 27.5 |
| 270.0 | 27.5 | 27.5 | 27.0 | 26.7 | 26.5 | 26.3 | 26.2 | 26.2 |
| 292.5 | 26.3 | 26.5 | 26.7 | 26.8 | 27.0 | 27.2 | 27.3 | 27.5 |
| 315.0 | 27.7 | 27.5 | 28.0 | 27.7 | 27.5 | 27.7 | 27.3 | 27.3 |
| 337.5 | 27.7 | 27.8 | 28.0 | 28.3 | 28.8 | 29.0 | 28.7 | 29.0 |

Depth: 942 Tilt: 0 Range: 59.6 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 38.2 | 38.2 | 38.2 | 38.0 | 37.5 | 37.5 | 36.7 | 37.2 |
| 22.5 | 36.0 | 35.2 | 36.2 | 36.5 | 38.5 | 38.2 | 39.2 | 39.7 |
| 45.0 | 39.7 | 39.7 | 40.0 | 40.8 | 41.3 | 41.5 | 43.0 | 44.3 |
| 67.5 | 44.5 | 44.8 | 45.0 | 45.5 | 46.3 | 46.5 | 47.0 | 46.3 |
| 90.0 | 45.3 | 45.5 | 45.0 | 45.0 | 45.0 | 45.3 | 45.0 | 45.3 |
| 112.5 | 45.0 | 45.0 | 45.0 | 44.8 | 45.0 | 45.5 | 45.0 | 45.5 |
| 135.0 | 45.3 | 45.3 | 45.3 | 45.5 | 45.8 | 46.0 | 46.0 | 46.0 |
| 157.5 | 46.0 | 46.3 | 46.5 | 46.3 | 46.3 | 46.3 | 46.8 | 46.8 |
| 180.0 | 46.5 | 46.5 | 46.3 | 46.0 | 46.0 | 46.0 | 46.3 | 46.8 |
| 202.5 | 46.8 | 46.8 | 46.8 | 47.0 | 47.0 | 47.0 | 46.8 | 46.8 |
| 225.0 | 46.8 | 46.5 | 46.5 | 45.5 | 44.5 | 44.3 | 44.3 | 44.3 |
| 247.5 | 44.3 | 45.0 | 45.0 | 45.0 | 45.0 | 45.5 | 45.5 | 45.8 |
| 270.0 | 45.8 | 45.3 | 45.3 | 45.5 | 45.5 | 45.3 | 45.0 | 44.5 |
| 292.5 | 44.5 | 45.3 | 44.8 | 44.3 | 44.3 | 44.3 | 44.3 | 44.3 |
| 315.0 | 44.3 | 44.3 | 43.8 | 43.8 | 43.0 | 42.3 | 41.8 | 41.5 |
| 337.5 | 40.8 | 40.0 | 39.2 | 38.7 | 38.2 | 38.0 | 38.0 | 38.2 |

Depth: 944 Tilt: 0 Range: 59.6 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 36.5 | 36.5 | 37.0 | 37.7 | 38.0 | 37.7 | 37.0 | 37.0 |
| 22.5 | 37.0 | 35.7 | 35.2 | 35.5 | 35.2 | 35.2 | 34.0 | 33.7 |
| 45.0 | 33.2 | 33.7 | 34.2 | 34.5 | 34.5 | 34.2 | 34.0 | 33.7 |
| 67.5 | 33.5 | 33.5 | 34.0 | 33.7 | 34.2 | 34.7 | 36.0 | 36.0 |
| 90.0 | 36.5 | 37.0 | 37.2 | 37.5 | 37.5 | 37.5 | 37.7 | 37.5 |
| 112.5 | 37.0 | 37.2 | 37.0 | 37.5 | 37.5 | 37.2 | 37.0 | 37.2 |
| 135.0 | 36.7 | 36.7 | 36.2 | 36.2 | 35.5 | 35.0 | 35.2 | 35.2 |
| 157.5 | 35.2 | 34.7 | 35.0 | 34.5 | 34.0 | 34.0 | 34.2 | 34.0 |
| 180.0 | 34.0 | 35.0 | 35.0 | 35.2 | 35.7 | 36.2 | 36.7 | 37.0 |
| 202.5 | 37.2 | 38.0 | 38.0 | 38.2 | 38.7 | 39.0 | 39.5 | 39.0 |
| 225.0 | 39.0 | 38.7 | 38.7 | 38.7 | 38.5 | 38.2 | 38.0 | 38.0 |
| 247.5 | 37.7 | 37.5 | 37.0 | 36.5 | 36.2 | 36.0 | 36.5 | 36.7 |
| 270.0 | 36.5 | 35.7 | 35.0 | 34.2 | 33.7 | 33.7 | 33.0 | 32.0 |
| 292.5 | 32.0 | 32.5 | 33.0 | 34.2 | 34.7 | 34.0 | 34.2 | 34.7 |
| 315.0 | 34.7 | 35.0 | 35.0 | 35.5 | 35.7 | 36.2 | 36.5 | 37.2 |
| 337.5 | 37.0 | 37.2 | 37.7 | 37.2 | 37.0 | 36.7 | 36.5 | 36.2 |

Depth: 946 Tilt: 0 Range: 59.6 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 32.5 | 32.0 | 31.7 | 31.4 | 31.2 | 30.4 | 30.7 | 30.4 |
| 22.5 | 30.2 | 30.4 | 30.7 | 30.9 | 30.7 | 30.4 | 30.4 | 30.2 |
| 45.0 | 30.2 | 30.9 | 31.7 | 32.5 | 32.5 | 32.7 | 33.2 | 34.0 |
| 67.5 | 34.5 | 34.2 | 35.0 | 35.7 | 36.5 | 37.5 | 36.7 | 36.7 |
| 90.0 | 36.5 | 36.2 | 36.0 | 35.7 | 35.5 | 35.0 | 34.2 | 34.7 |
| 112.5 | 34.2 | 33.2 | 32.7 | 32.2 | 31.7 | 31.7 | 31.7 | 31.4 |
| 135.0 | 31.2 | 30.7 | 30.2 | 29.2 | 29.4 | 29.4 | 29.4 | 30.2 |
| 157.5 | 30.4 | 30.7 | 31.2 | 31.4 | 32.5 | 34.0 | 35.0 | 35.7 |
| 180.0 | 37.2 | 37.5 | 39.2 | 39.2 | 38.7 | 38.2 | 38.0 | 37.7 |
| 202.5 | 37.5 | 37.2 | 36.5 | 35.7 | 35.2 | 35.0 | 35.2 | 35.5 |
| 225.0 | 35.5 | 35.2 | 35.2 | 34.7 | 34.2 | 33.7 | 33.2 | 32.7 |
| 247.5 | 31.7 | 30.9 | 29.9 | 28.2 | 28.2 | 28.2 | 28.2 | 28.7 |
| 270.0 | 29.7 | 30.7 | 31.4 | 32.0 | 32.2 | 32.2 | 32.2 | 32.7 |
| 292.5 | 33.5 | 34.0 | 33.7 | 33.2 | 33.0 | 32.7 | 32.7 | 32.5 |
| 315.0 | 33.0 | 33.5 | 33.7 | 33.7 | 33.7 | 33.7 | 33.7 | 33.2 |
| 337.5 | 32.7 | 32.2 | 32.2 | 32.2 | 32.7 | 32.7 | 32.7 | 32.7 |

Depth: 948 Tilt: 0 Range: 49.7 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 27.0 | 27.7 | 27.9 | 28.1 | 28.3 | 28.7 | 28.9 | 29.1 |
| 22.5 | 29.4 | 30.2 | 30.2 | 30.2 | 30.2 | 30.4 | 30.4 | 30.6 |
| 45.0 | 30.6 | 30.8 | 31.0 | 31.0 | 31.0 | 31.4 | 31.4 | 31.4 |
| 67.5 | 31.4 | 31.4 | 31.4 | 31.2 | 30.8 | 30.8 | 30.4 | 30.4 |
| 90.0 | 30.4 | 30.2 | 30.2 | 29.6 | 28.9 | 28.7 | 28.7 | 28.7 |
| 112.5 | 28.7 | 27.9 | 27.7 | 27.7 | 27.7 | 27.3 | 27.5 | 27.7 |
| 135.0 | 27.9 | 28.1 | 28.3 | 28.5 | 29.1 | 29.6 | 29.6 | 29.6 |
| 157.5 | 30.0 | 30.6 | 30.8 | 31.2 | 32.1 | 33.1 | 34.0 | 35.0 |
| 180.0 | 36.5 | 36.9 | 37.1 | 36.9 | 36.7 | 35.9 | 34.8 | 34.0 |
| 202.5 | 32.9 | 32.3 | 31.7 | 31.2 | 30.4 | 29.6 | 29.6 | 29.6 |
| 225.0 | 29.6 | 29.6 | 29.6 | 29.6 | 29.6 | 28.9 | 28.9 | 28.9 |
| 247.5 | 28.7 | 28.7 | 28.7 | 28.5 | 28.5 | 28.5 | 28.5 | 28.3 |
| 270.0 | 28.3 | 28.7 | 28.7 | 28.7 | 29.4 | 29.4 | 28.9 | 28.9 |
| 292.5 | 29.6 | 29.6 | 29.8 | 30.0 | 30.2 | 30.6 | 30.6 | 30.6 |
| 315.0 | 30.4 | 30.2 | 29.8 | 29.6 | 29.6 | 29.6 | 29.6 | 29.6 |
| 337.5 | 29.4 | 29.4 | 29.4 | 29.4 | 29.1 | 29.1 | 28.3 | 27.7 |

Depth: 950 Tilt: 0 Range: 49.7 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 21.2 | 21.2 | 21.6 | 21.6 | 21.6 | 21.6 | 22.2 | 22.2 |
| 22.5 | 22.6 | 22.9 | 22.9 | 22.9 | 23.1 | 23.3 | 23.3 | 23.3 |
| 45.0 | 23.3 | 22.9 | 22.9 | 22.2 | 21.6 | 21.4 | 21.2 | 21.0 |
| 67.5 | 19.9 | 19.5 | 18.9 | 18.0 | 17.4 | 17.2 | 17.0 | 15.9 |
| 90.0 | 16.1 | 15.9 | 15.3 | 15.9 | 16.1 | 16.6 | 17.2 | 17.2 |
| 112.5 | 17.2 | 17.2 | 17.4 | 17.4 | 17.4 | 17.6 | 17.8 | 18.9 |
| 135.0 | 19.5 | 20.8 | 23.5 | 23.9 | 24.9 | 25.4 | 25.8 | 26.2 |
| 157.5 | 26.6 | 27.3 | 27.5 | 27.7 | 27.9 | 28.1 | 28.3 | 28.5 |
| 180.0 | 28.7 | 28.9 | 29.1 | 28.5 | 28.5 | 27.9 | 27.0 | 24.7 |
| 202.5 | 23.5 | 23.3 | 21.8 | 21.8 | 19.9 | 19.9 | 18.4 | 18.0 |
| 225.0 | 18.0 | 18.0 | 18.0 | 17.4 | 17.0 | 17.0 | 17.0 | 17.4 |
| 247.5 | 17.4 | 17.6 | 18.4 | 19.1 | 19.1 | 19.1 | 19.5 | 19.5 |
| 270.0 | 19.5 | 19.5 | 19.7 | 19.7 | 19.9 | 19.9 | 19.9 | 19.9 |
| 292.5 | 19.7 | 19.7 | 19.5 | 19.5 | 18.7 | 18.7 | 18.7 | 18.7 |
| 315.0 | 19.1 | 19.1 | 19.1 | 19.1 | 19.3 | 19.3 | 19.1 | 19.1 |
| 337.5 | 19.1 | 19.5 | 19.5 | 19.5 | 19.7 | 19.9 | 20.5 | 21.2 |

Depth: 952 Tilt: 0 Range: 49.7 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 17.0 | 17.2 | 18.0 | 18.0 | 18.0 | 18.4 | 18.9 | 19.1 |
| 22.5 | 19.5 | 19.7 | 19.7 | 19.5 | 19.5 | 19.5 | 19.1 | 19.1 |
| 45.0 | 18.7 | 18.0 | 18.0 | 18.0 | 17.8 | 17.8 | 17.2 | 15.9 |
| 67.5 | 15.3 | 15.1 | 15.1 | 14.3 | 14.3 | 13.8 | 13.6 | 13.6 |
| 90.0 | 13.0 | 12.2 | 12.0 | 12.0 | 11.7 | 11.3 | 11.3 | 11.3 |
| 112.5 | 11.5 | 11.5 | 11.7 | 11.7 | 12.0 | 12.4 | 13.0 | 13.2 |
| 135.0 | 13.6 | 16.8 | 18.4 | 18.7 | 19.1 | 19.5 | 19.5 | 19.7 |
| 157.5 | 19.9 | 20.3 | 20.3 | 20.5 | 20.8 | 21.4 | 21.8 | 22.2 |
| 180.0 | 22.2 | 22.2 | 22.2 | 22.2 | 21.8 | 15.3 | 13.0 | 12.8 |
| 202.5 | 13.0 | 13.0 | 12.8 | 12.4 | 12.4 | 13.0 | 13.2 | 13.2 |
| 225.0 | 13.2 | 13.0 | 13.2 | 13.2 | 13.2 | 13.4 | 14.0 | 14.9 |
| 247.5 | 15.1 | 15.5 | 15.9 | 16.6 | 16.6 | 16.8 | 17.0 | 17.0 |
| 270.0 | 17.2 | 17.4 | 17.8 | 17.4 | 17.4 | 17.4 | 17.6 | 17.4 |
| 292.5 | 17.2 | 17.0 | 16.8 | 16.6 | 15.7 | 15.7 | 15.3 | 15.3 |
| 315.0 | 15.3 | 15.5 | 15.9 | 16.8 | 16.6 | 16.6 | 16.8 | 16.6 |
| 337.5 | 16.6 | 16.6 | 16.6 | 16.8 | 16.8 | 17.0 | 16.8 | 17.0 |

Depth: 954 Tilt: 0 Range: 49.7 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 14.7 | 14.3 | 14.3 | 14.3 | 14.9 | 15.3 | 15.5 | 15.7 |
| 22.5 | 15.9 | 17.0 | 17.2 | 17.4 | 17.4 | 17.4 | 17.4 | 17.2 |
| 45.0 | 17.2 | 17.2 | 17.0 | 17.0 | 16.6 | 15.7 | 15.7 | 15.7 |
| 67.5 | 15.3 | 14.3 | 13.4 | 12.4 | 12.0 | 11.7 | 11.3 | 10.9 |
| 90.0 | 10.5 | 10.9 | 10.5 | 10.3 | 10.3 | 10.3 | 10.3 | 10.3 |
| 112.5 | 10.3 | 10.3 | 10.3 | 9.9 | 9.9 | 9.9 | 10.1 | 9.9 |
| 135.0 | 10.1 | 10.3 | 10.9 | 11.1 | 11.7 | 13.2 | 16.8 | 17.4 |
| 157.5 | 18.0 | 18.4 | 18.7 | 18.9 | 18.7 | 18.9 | 18.9 | 18.4 |
| 180.0 | 17.6 | 17.4 | 17.0 | 17.0 | 16.1 | 15.5 | 14.3 | 12.0 |
| 202.5 | 10.1 | 10.1 | 10.3 | 10.3 | 10.1 | 10.1 | 9.9 | 10.1 |
| 225.0 | 9.9 | 9.9 | 10.1 | 10.1 | 10.1 | 10.1 | 10.3 | 10.9 |
| 247.5 | 11.3 | 11.3 | 11.7 | 12.0 | 12.8 | 13.2 | 13.8 | 14.9 |
| 270.0 | 15.5 | 16.1 | 16.8 | 16.6 | 16.1 | 15.9 | 15.9 | 15.9 |
| 292.5 | 15.7 | 15.5 | 15.7 | 15.3 | 15.1 | 15.1 | 14.3 | 13.8 |
| 315.0 | 13.6 | 13.4 | 13.2 | 13.4 | 13.4 | 13.6 | 14.0 | 14.3 |
| 337.5 | 14.7 | 14.3 | 14.3 | 14.3 | 14.0 | 14.3 | 14.3 | 14.7 |

Depth: 956 Tilt: 0 Range: 49.7 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 19.5 | 19.5 | 19.7 | 19.9 | 19.7 | 19.7 | 19.7 | 19.9 |
| 22.5 | 19.7 | 19.7 | 19.7 | 19.9 | 20.5 | 20.8 | 21.0 | 20.8 |
| 45.0 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 |
| 67.5 | 20.3 | 20.3 | 19.9 | 19.7 | 19.7 | 19.7 | 19.7 | 20.5 |
| 90.0 | 21.6 | 22.4 | 23.1 | 23.9 | 23.3 | 22.9 | 22.6 | 22.4 |
| 112.5 | 22.4 | 22.4 | 22.4 | 22.4 | 22.4 | 22.2 | 22.2 | 22.2 |
| 135.0 | 21.8 | 21.8 | 22.2 | 22.6 | 22.9 | 23.1 | 23.3 | 23.1 |
| 157.5 | 23.1 | 22.9 | 22.6 | 22.6 | 22.6 | 22.4 | 22.2 | 22.2 |
| 180.0 | 22.6 | 22.2 | 21.8 | 22.2 | 21.8 | 21.8 | 20.8 | 20.8 |
| 202.5 | 20.8 | 20.8 | 20.8 | 20.8 | 20.5 | 20.5 | 20.5 | 19.7 |
| 225.0 | 19.3 | 19.1 | 19.1 | 19.1 | 19.1 | 18.0 | 17.4 | 17.4 |
| 247.5 | 17.2 | 17.0 | 16.8 | 16.1 | 16.1 | 16.1 | 16.1 | 16.1 |
| 270.0 | 16.1 | 15.7 | 15.7 | 15.7 | 15.7 | 15.9 | 15.9 | 15.9 |
| 292.5 | 15.9 | 16.1 | 16.6 | 16.8 | 17.4 | 17.6 | 18.0 | 18.9 |
| 315.0 | 19.5 | 19.7 | 19.9 | 20.3 | 20.5 | 20.8 | 20.8 | 21.4 |
| 337.5 | 21.8 | 21.8 | 21.8 | 21.0 | 19.9 | 19.5 | 19.5 | 19.5 |

Depth: 958 Tilt: 0 Range: 89.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 59.6 | 59.6 | 60.4 | 60.4 | 61.1 | 61.1 | 61.1 | 60.8 |
| 22.5 | 61.1 | 61.1 | 61.1 | 61.1 | 61.5 | 62.3 | 62.3 | 63.0 |
| 45.0 | 63.0 | 63.0 | 63.4 | 63.4 | 63.0 | 62.3 | 61.5 | 60.4 |
| 67.5 | 60.0 | 58.5 | 57.0 | 56.6 | 55.5 | 55.9 | 56.2 | 56.6 |
| 90.0 | 57.0 | 57.0 | 57.4 | 58.1 | 65.3 | 66.0 | 67.5 | 69.1 |
| 112.5 | 69.8 | 70.2 | 70.9 | 70.9 | 70.9 | 69.8 | 69.8 | 69.8 |
| 135.0 | 69.4 | 69.4 | 70.2 | 70.2 | 70.6 | 70.9 | 70.6 | 70.6 |
| 157.5 | 70.6 | 70.2 | 70.2 | 70.9 | 71.3 | 71.3 | 72.1 | 72.1 |
| 180.0 | 72.5 | 72.5 | 72.5 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 |
| 202.5 | 71.3 | 70.6 | 70.6 | 70.9 | 70.2 | 70.2 | 67.9 | 67.5 |
| 225.0 | 66.8 | 67.9 | 67.5 | 66.4 | 67.2 | 66.8 | 67.2 | 67.2 |
| 247.5 | 67.2 | 67.5 | 67.2 | 66.4 | 66.4 | 66.4 | 66.8 | 67.2 |
| 270.0 | 66.8 | 66.4 | 67.2 | 68.3 | 67.2 | 67.5 | 67.2 | 66.0 |
| 292.5 | 66.0 | 64.5 | 64.5 | 64.5 | 64.2 | 64.2 | 63.8 | 63.0 |
| 315.0 | 62.6 | 62.6 | 62.6 | 62.6 | 62.6 | 61.9 | 61.9 | 61.5 |
| 337.5 | 61.1 | 61.1 | 60.4 | 60.4 | 60.0 | 60.0 | 59.6 | 59.6 |

Depth: 960 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 62.9 | 63.7 | 64.6 | 64.6 | 64.2 | 63.7 | 63.7 | 63.7 |
| 22.5 | 64.6 | 64.6 | 65.0 | 65.4 | 64.6 | 64.6 | 64.2 | 64.2 |
| 45.0 | 64.2 | 64.6 | 63.7 | 63.3 | 64.2 | 63.3 | 63.3 | 63.7 |
| 67.5 | 64.2 | 64.6 | 64.2 | 63.7 | 63.7 | 63.7 | 63.7 | 63.7 |
| 90.0 | 63.7 | 63.3 | 64.6 | 65.0 | 65.8 | 66.7 | 67.1 | 67.9 |
| 112.5 | 68.3 | 68.8 | 68.8 | 68.8 | 69.2 | 69.6 | 70.0 | 70.4 |
| 135.0 | 69.6 | 68.8 | 69.6 | 70.0 | 70.9 | 70.9 | 70.9 | 70.9 |
| 157.5 | 71.3 | 71.3 | 71.3 | 70.9 | 70.9 | 71.7 | 72.1 | 72.5 |
| 180.0 | 72.5 | 72.1 | 72.1 | 72.1 | 71.7 | 71.3 | 70.4 | 71.3 |
| 202.5 | 70.9 | 69.6 | 70.0 | 67.9 | 67.5 | 67.5 | 67.5 | 65.4 |
| 225.0 | 64.6 | 63.7 | 65.0 | 65.8 | 65.0 | 66.7 | 67.1 | 67.5 |
| 247.5 | 68.3 | 68.3 | 67.9 | 67.5 | 66.7 | 65.8 | 66.2 | 67.9 |
| 270.0 | 66.7 | 66.7 | 66.2 | 66.2 | 67.1 | 67.9 | 67.1 | 67.1 |
| 292.5 | 67.1 | 67.5 | 65.8 | 65.4 | 65.4 | 65.0 | 64.6 | 64.2 |
| 315.0 | 63.7 | 63.7 | 63.7 | 62.9 | 62.1 | 61.6 | 61.2 | 60.8 |
| 337.5 | 60.4 | 60.4 | 59.5 | 59.1 | 59.5 | 60.0 | 60.4 | 61.6 |

Depth: 962 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 60.4 | 57.9 | 55.8 | 55.3 | 53.7 | 52.8 | 53.3 | 53.3 |
| 22.5 | 54.1 | 53.7 | 52.4 | 52.0 | 52.4 | 52.4 | 53.3 | 52.8 |
| 45.0 | 53.7 | 54.5 | 54.5 | 54.5 | 55.3 | 56.6 | 57.9 | 59.1 |
| 67.5 | 60.8 | 62.5 | 63.7 | 64.2 | 65.0 | 65.8 | 66.2 | 66.7 |
| 90.0 | 66.7 | 66.2 | 65.8 | 65.8 | 65.0 | 65.0 | 65.0 | 65.0 |
| 112.5 | 65.0 | 65.0 | 65.0 | 65.0 | 65.0 | 65.0 | 65.4 | 65.8 |
| 135.0 | 65.8 | 65.8 | 65.4 | 64.6 | 64.2 | 63.7 | 63.7 | 63.7 |
| 157.5 | 64.2 | 65.4 | 65.0 | 65.4 | 66.7 | 67.1 | 67.1 | 66.7 |
| 180.0 | 66.7 | 66.7 | 67.5 | 67.5 | 68.3 | 68.3 | 69.2 | 69.2 |
| 202.5 | 68.3 | 67.9 | 67.9 | 68.3 | 68.8 | 67.9 | 66.7 | 66.2 |
| 225.0 | 66.2 | 64.6 | 62.1 | 61.2 | 59.5 | 59.1 | 58.3 | 56.6 |
| 247.5 | 55.8 | 55.8 | 55.3 | 55.3 | 55.3 | 56.2 | 57.0 | 57.4 |
| 270.0 | 59.1 | 60.4 | 61.6 | 61.6 | 61.2 | 60.8 | 60.4 | 60.0 |
| 292.5 | 60.0 | 60.8 | 62.9 | 62.5 | 62.5 | 62.1 | 62.5 | 61.6 |
| 315.0 | 61.2 | 61.2 | 61.6 | 62.1 | 62.1 | 62.9 | 63.7 | 64.2 |
| 337.5 | 64.6 | 65.4 | 66.7 | 68.8 | 68.3 | 67.5 | 66.2 | 61.2 |

Depth: 964 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 54.9 | 53.7 | 53.7 | 53.7 | 53.3 | 52.8 | 52.8 | 52.8 |
| 22.5 | 53.3 | 53.7 | 53.7 | 54.9 | 54.5 | 57.4 | 60.4 | 62.5 |
| 45.0 | 63.3 | 64.2 | 63.7 | 63.7 | 64.6 | 65.4 | 66.2 | 66.7 |
| 67.5 | 66.2 | 65.8 | 65.4 | 65.0 | 65.0 | 63.7 | 63.3 | 63.3 |
| 90.0 | 64.2 | 65.0 | 65.0 | 64.2 | 63.7 | 64.2 | 64.6 | 65.8 |
| 112.5 | 65.8 | 65.8 | 65.4 | 65.0 | 65.0 | 65.0 | 65.0 | 65.0 |
| 135.0 | 65.0 | 65.0 | 64.6 | 65.0 | 64.6 | 65.4 | 67.9 | 68.3 |
| 157.5 | 67.1 | 66.2 | 65.8 | 66.2 | 67.1 | 67.5 | 66.7 | 66.7 |
| 180.0 | 66.2 | 67.1 | 65.8 | 65.4 | 61.2 | 54.9 | 54.9 | 54.9 |
| 202.5 | 54.9 | 55.3 | 55.8 | 55.8 | 57.0 | 57.4 | 59.1 | 60.0 |
| 225.0 | 60.4 | 60.4 | 60.8 | 60.8 | 60.8 | 59.5 | 59.1 | 59.5 |
| 247.5 | 60.0 | 60.4 | 60.4 | 60.4 | 60.8 | 60.4 | 59.5 | 59.5 |
| 270.0 | 60.8 | 61.6 | 62.9 | 62.5 | 63.3 | 63.3 | 63.7 | 63.7 |
| 292.5 | 62.9 | 62.1 | 61.6 | 60.8 | 60.8 | 60.8 | 60.8 | 60.8 |
| 315.0 | 60.4 | 60.0 | 60.0 | 60.8 | 60.8 | 60.0 | 60.0 | 60.0 |
| 337.5 | 59.5 | 59.5 | 57.9 | 57.9 | 56.6 | 56.6 | 55.8 | 55.8 |

Depth: 966 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 47.4 | 48.2 | 49.1 | 48.2 | 48.6 | 48.6 | 48.6 | 49.5 |
| 22.5 | 49.9 | 50.3 | 50.7 | 56.2 | 56.2 | 57.0 | 57.0 | 57.4 |
| 45.0 | 57.9 | 58.7 | 59.5 | 59.5 | 60.0 | 61.6 | 62.5 | 61.6 |
| 67.5 | 61.6 | 60.4 | 60.0 | 60.4 | 60.8 | 59.5 | 58.3 | 58.7 |
| 90.0 | 58.7 | 58.7 | 57.4 | 56.2 | 57.9 | 58.7 | 58.7 | 58.3 |
| 112.5 | 57.9 | 58.7 | 61.6 | 62.9 | 66.7 | 66.7 | 66.2 | 66.2 |
| 135.0 | 66.2 | 66.7 | 67.1 | 67.1 | 65.8 | 65.8 | 66.2 | 65.8 |
| 157.5 | 66.2 | 66.2 | 65.8 | 65.8 | 65.4 | 65.4 | 65.0 | 65.0 |
| 180.0 | 65.4 | 65.0 | 64.6 | 65.0 | 65.8 | 54.9 | 55.8 | 57.0 |
| 202.5 | 58.3 | 61.6 | 61.6 | 63.7 | 64.2 | 62.9 | 62.9 | 63.3 |
| 225.0 | 63.3 | 62.9 | 61.2 | 60.4 | 60.4 | 60.8 | 61.2 | 61.2 |
| 247.5 | 62.1 | 62.5 | 64.2 | 65.0 | 66.2 | 67.1 | 67.1 | 67.1 |
| 270.0 | 66.7 | 66.2 | 65.0 | 65.4 | 65.0 | 64.6 | 64.6 | 65.0 |
| 292.5 | 65.4 | 65.4 | 63.3 | 62.9 | 62.5 | 63.7 | 63.7 | 63.7 |
| 315.0 | 63.3 | 62.5 | 62.5 | 61.2 | 61.2 | 61.2 | 61.2 | 60.8 |
| 337.5 | 59.1 | 57.9 | 54.1 | 52.4 | 49.1 | 47.4 | 47.0 | 47.4 |

Depth: 968 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 44.4 | 43.6 | 44.0 | 44.0 | 45.3 | 44.9 | 44.9 | 44.0 |
| 22.5 | 43.6 | 43.6 | 44.0 | 45.3 | 48.6 | 52.4 | 54.1 | 54.9 |
| 45.0 | 54.9 | 55.8 | 55.8 | 57.0 | 55.8 | 54.9 | 54.1 | 54.9 |
| 67.5 | 67.1 | 67.1 | 67.1 | 67.1 | 67.1 | 67.1 | 67.1 | 66.7 |
| 90.0 | 66.7 | 66.7 | 66.7 | 66.7 | 67.1 | 67.1 | 67.1 | 67.5 |
| 112.5 | 67.1 | 67.1 | 66.7 | 67.5 | 67.9 | 67.5 | 66.7 | 66.2 |
| 135.0 | 66.2 | 66.7 | 66.7 | 66.7 | 66.2 | 65.8 | 65.8 | 65.8 |
| 157.5 | 66.2 | 65.8 | 65.8 | 65.4 | 65.0 | 65.8 | 65.8 | 66.2 |
| 180.0 | 65.8 | 65.8 | 65.0 | 65.0 | 64.2 | 64.2 | 51.2 | 52.4 |
| 202.5 | 56.2 | 58.7 | 60.0 | 61.6 | 63.7 | 63.7 | 64.6 | 64.6 |
| 225.0 | 63.3 | 63.3 | 63.3 | 63.3 | 62.1 | 61.6 | 61.2 | 62.5 |
| 247.5 | 64.2 | 64.6 | 65.0 | 65.4 | 66.2 | 66.2 | 66.7 | 67.1 |
| 270.0 | 66.2 | 66.2 | 67.1 | 65.8 | 65.8 | 65.8 | 65.4 | 65.4 |
| 292.5 | 65.4 | 65.8 | 65.8 | 65.8 | 65.0 | 65.0 | 64.6 | 65.4 |
| 315.0 | 66.2 | 66.2 | 65.8 | 65.0 | 62.5 | 62.5 | 62.5 | 64.2 |
| 337.5 | 63.7 | 62.5 | 60.4 | 57.9 | 46.5 | 45.7 | 44.9 | 44.9 |

Depth: 970 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 43.2 | 43.2 | 43.6 | 42.3 | 42.3 | 42.3 | 41.1 | 40.3 |
| 22.5 | 41.1 | 41.1 | 42.8 | 44.0 | 47.0 | 51.2 | 52.8 | 53.7 |
| 45.0 | 53.7 | 53.7 | 54.1 | 53.7 | 53.7 | 53.7 | 53.3 | 59.1 |
| 67.5 | 65.4 | 65.8 | 66.2 | 67.1 | 67.1 | 67.1 | 66.7 | 66.7 |
| 90.0 | 66.2 | 67.1 | 66.7 | 66.7 | 67.1 | 67.1 | 67.5 | 67.1 |
| 112.5 | 67.1 | 66.7 | 66.2 | 66.2 | 66.7 | 66.7 | 66.2 | 65.8 |
| 135.0 | 66.2 | 66.2 | 66.2 | 66.7 | 65.4 | 64.2 | 64.6 | 65.8 |
| 157.5 | 65.8 | 65.8 | 65.8 | 65.8 | 65.8 | 65.8 | 65.8 | 64.2 |
| 180.0 | 60.8 | 56.2 | 54.1 | 51.2 | 48.6 | 49.9 | 51.2 | 52.4 |
| 202.5 | 53.3 | 58.7 | 60.8 | 61.6 | 63.3 | 65.0 | 65.0 | 63.7 |
| 225.0 | 62.9 | 62.9 | 63.3 | 63.3 | 62.5 | 62.1 | 62.5 | 63.3 |
| 247.5 | 64.6 | 65.0 | 65.4 | 65.4 | 65.8 | 67.1 | 67.9 | 67.5 |
| 270.0 | 67.9 | 67.5 | 66.7 | 67.1 | 67.1 | 66.7 | 67.1 | 66.7 |
| 292.5 | 66.7 | 65.8 | 64.6 | 64.6 | 64.6 | 65.0 | 65.0 | 67.1 |
| 315.0 | 67.5 | 67.1 | 65.8 | 63.3 | 63.3 | 64.2 | 64.2 | 64.2 |
| 337.5 | 63.3 | 61.6 | 61.2 | 59.5 | 44.0 | 44.0 | 43.6 | 43.6 |

Depth: 972 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 38.6 | 38.6 | 39.0 | 38.6 | 37.7 | 36.9 | 36.5 | 36.9 |
| 22.5 | 39.0 | 38.6 | 49.9 | 50.7 | 49.9 | 49.9 | 49.9 | 49.9 |
| 45.0 | 49.9 | 50.3 | 49.9 | 50.3 | 50.7 | 50.3 | 50.7 | 65.8 |
| 67.5 | 66.7 | 66.7 | 66.7 | 66.7 | 66.7 | 66.7 | 66.7 | 66.7 |
| 90.0 | 66.7 | 66.7 | 66.7 | 66.7 | 68.3 | 67.9 | 67.1 | 65.8 |
| 112.5 | 65.4 | 65.4 | 64.2 | 62.9 | 62.9 | 62.5 | 62.5 | 62.5 |
| 135.0 | 62.5 | 63.3 | 63.7 | 63.3 | 63.3 | 62.1 | 62.5 | 62.9 |
| 157.5 | 61.6 | 60.4 | 62.5 | 61.6 | 62.5 | 60.0 | 58.7 | 55.8 |
| 180.0 | 53.3 | 47.8 | 47.0 | 44.0 | 45.3 | 45.3 | 46.1 | 47.4 |
| 202.5 | 60.4 | 60.4 | 61.2 | 61.6 | 62.9 | 62.5 | 62.1 | 61.2 |
| 225.0 | 60.8 | 60.4 | 59.5 | 60.0 | 61.2 | 62.1 | 62.1 | 62.1 |
| 247.5 | 64.6 | 65.8 | 62.9 | 63.7 | 65.0 | 65.4 | 65.4 | 65.0 |
| 270.0 | 64.2 | 64.2 | 64.2 | 64.2 | 64.6 | 64.6 | 64.6 | 63.7 |
| 292.5 | 63.7 | 63.3 | 63.3 | 64.2 | 65.0 | 66.7 | 66.7 | 67.5 |
| 315.0 | 67.5 | 67.5 | 66.2 | 66.2 | 66.2 | 66.2 | 66.2 | 66.2 |
| 337.5 | 66.2 | 66.2 | 66.2 | 65.8 | 40.3 | 41.1 | 40.7 | 39.8 |

Depth: 974 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 38.6 | 37.7 | 37.7 | 36.9 | 36.9 | 37.7 | 38.2 | 37.7 |
| 22.5 | 36.9 | 36.9 | 36.9 | 36.9 | 38.2 | 39.0 | 39.0 | 53.3 |
| 45.0 | 51.2 | 49.1 | 48.2 | 48.6 | 49.1 | 48.6 | 48.6 | 49.5 |
| 67.5 | 49.5 | 66.2 | 65.8 | 65.8 | 65.8 | 65.8 | 65.8 | 65.8 |
| 90.0 | 65.4 | 65.4 | 64.6 | 64.6 | 64.6 | 64.6 | 64.2 | 64.2 |
| 112.5 | 65.0 | 62.5 | 62.9 | 64.2 | 63.7 | 63.7 | 62.1 | 61.6 |
| 135.0 | 61.2 | 60.8 | 60.4 | 60.0 | 60.0 | 59.5 | 59.1 | 58.7 |
| 157.5 | 58.7 | 59.1 | 59.1 | 59.5 | 59.1 | 58.3 | 59.1 | 58.3 |
| 180.0 | 57.9 | 57.0 | 57.0 | 57.0 | 57.0 | 57.0 | 57.0 | 57.9 |
| 202.5 | 57.9 | 57.9 | 57.9 | 58.7 | 58.3 | 59.1 | 59.1 | 59.1 |
| 225.0 | 57.0 | 57.4 | 57.4 | 57.0 | 56.6 | 58.7 | 59.1 | 59.1 |
| 247.5 | 59.1 | 59.1 | 59.1 | 59.1 | 59.1 | 60.4 | 60.4 | 60.4 |
| 270.0 | 61.6 | 61.6 | 61.2 | 61.2 | 61.6 | 61.6 | 61.6 | 61.6 |
| 292.5 | 61.6 | 61.6 | 60.4 | 60.0 | 60.0 | 60.4 | 58.7 | 58.7 |
| 315.0 | 59.1 | 58.7 | 57.9 | 54.9 | 53.7 | 53.3 | 53.3 | 52.0 |
| 337.5 | 51.6 | 50.7 | 50.7 | 39.0 | 39.0 | 39.0 | 39.0 | 38.6 |

Depth: 976 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 65.0 | 64.6 | 62.1 | 62.5 | 61.6 | 64.2 | 64.2 | 64.2 |
| 22.5 | 62.9 | 63.7 | 63.7 | 63.7 | 63.3 | 62.1 | 61.6 | 61.2 |
| 45.0 | 62.1 | 62.1 | 61.6 | 62.1 | 61.6 | 61.6 | 61.6 | 61.2 |
| 67.5 | 61.2 | 62.1 | 60.0 | 59.5 | 59.5 | 59.5 | 59.5 | 59.5 |
| 90.0 | 60.4 | 59.5 | 59.5 | 60.0 | 58.3 | 57.4 | 57.9 | 60.0 |
| 112.5 | 60.0 | 60.8 | 62.1 | 62.1 | 63.3 | 64.6 | 64.2 | 65.0 |
| 135.0 | 65.0 | 64.6 | 60.8 | 60.8 | 60.8 | 60.8 | 61.6 | 62.9 |
| 157.5 | 57.4 | 57.4 | 56.6 | 56.2 | 56.2 | 57.0 | 59.1 | 59.1 |
| 180.0 | 62.9 | 62.9 | 62.5 | 62.1 | 61.2 | 61.2 | 61.2 | 61.6 |
| 202.5 | 61.6 | 61.2 | 60.8 | 59.5 | 59.1 | 60.4 | 61.2 | 59.5 |
| 225.0 | 59.1 | 59.1 | 58.7 | 58.7 | 59.5 | 59.1 | 58.7 | 59.5 |
| 247.5 | 59.5 | 62.9 | 61.6 | 61.2 | 59.5 | 59.5 | 59.5 | 59.5 |
| 270.0 | 62.9 | 62.9 | 63.3 | 63.3 | 63.3 | 67.1 | 67.1 | 66.7 |
| 292.5 | 66.7 | 67.1 | 66.7 | 67.1 | 66.2 | 66.7 | 67.5 | 67.1 |
| 315.0 | 65.4 | 65.8 | 64.2 | 64.2 | 63.7 | 65.0 | 64.6 | 65.0 |
| 337.5 | 65.0 | 62.9 | 62.9 | 62.5 | 62.5 | 62.5 | 64.6 | 64.2 |

Depth: 978 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 67.9 | 67.9 | 68.3 | 67.9 | 67.9 | 67.5 | 67.5 | 67.9 |
| 22.5 | 67.5 | 67.5 | 67.9 | 67.5 | 66.7 | 66.7 | 67.5 | 66.7 |
| 45.0 | 67.1 | 66.7 | 66.7 | 66.7 | 66.2 | 65.0 | 65.0 | 65.4 |
| 67.5 | 65.4 | 65.4 | 64.6 | 63.7 | 63.7 | 64.6 | 65.0 | 64.2 |
| 90.0 | 63.3 | 63.3 | 63.3 | 63.7 | 63.3 | 62.5 | 62.9 | 62.5 |
| 112.5 | 63.3 | 63.7 | 63.3 | 62.9 | 62.9 | 62.9 | 62.9 | 61.2 |
| 135.0 | 62.5 | 62.9 | 62.9 | 63.3 | 64.2 | 64.2 | 62.9 | 63.3 |
| 157.5 | 63.3 | 61.2 | 60.8 | 60.4 | 60.8 | 61.2 | 61.6 | 65.0 |
| 180.0 | 65.0 | 65.0 | 63.7 | 63.7 | 63.7 | 63.7 | 64.2 | 64.6 |
| 202.5 | 65.4 | 65.0 | 65.4 | 65.4 | 65.4 | 65.4 | 65.4 | 64.2 |
| 225.0 | 63.7 | 63.7 | 63.7 | 64.2 | 63.7 | 64.2 | 63.7 | 64.2 |
| 247.5 | 63.7 | 62.5 | 62.1 | 62.5 | 62.5 | 62.5 | 61.2 | 62.5 |
| 270.0 | 60.8 | 61.2 | 61.2 | 62.1 | 62.5 | 63.7 | 62.9 | 62.1 |
| 292.5 | 62.5 | 62.1 | 62.1 | 64.2 | 66.2 | 67.1 | 66.2 | 67.1 |
| 315.0 | 67.5 | 66.7 | 65.4 | 63.3 | 63.7 | 64.2 | 64.6 | 68.8 |
| 337.5 | 68.8 | 67.1 | 65.4 | 65.4 | 67.1 | 66.2 | 67.9 | 67.5 |

Depth: 980 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 68.8 | 68.3 | 67.9 | 68.3 | 68.3 | 67.5 | 68.3 | 68.3 |
| 22.5 | 68.3 | 68.8 | 69.6 | 69.6 | 69.2 | 68.8 | 67.1 | 67.9 |
| 45.0 | 67.9 | 67.9 | 68.3 | 68.8 | 68.3 | 67.9 | 68.8 | 67.1 |
| 67.5 | 67.1 | 67.1 | 67.1 | 67.5 | 67.5 | 67.5 | 67.1 | 67.5 |
| 90.0 | 66.7 | 66.2 | 66.7 | 65.8 | 65.0 | 66.2 | 66.2 | 66.7 |
| 112.5 | 65.4 | 65.4 | 65.4 | 65.4 | 64.6 | 64.2 | 63.7 | 64.2 |
| 135.0 | 63.7 | 63.3 | 64.6 | 65.0 | 65.4 | 65.4 | 65.0 | 64.6 |
| 157.5 | 64.6 | 65.8 | 65.4 | 65.4 | 65.4 | 64.6 | 63.7 | 64.6 |
| 180.0 | 67.1 | 66.2 | 66.2 | 64.6 | 64.6 | 64.6 | 65.4 | 65.8 |
| 202.5 | 65.8 | 65.8 | 65.0 | 64.2 | 64.6 | 64.6 | 65.0 | 65.8 |
| 225.0 | 65.4 | 65.8 | 66.2 | 66.7 | 65.8 | 65.8 | 65.8 | 65.8 |
| 247.5 | 65.8 | 65.8 | 64.2 | 64.2 | 64.6 | 64.2 | 63.7 | 64.2 |
| 270.0 | 63.7 | 63.3 | 63.3 | 63.3 | 62.9 | 63.7 | 63.3 | 63.3 |
| 292.5 | 63.3 | 62.9 | 62.9 | 64.2 | 64.2 | 65.4 | 65.4 | 65.4 |
| 315.0 | 65.8 | 67.1 | 66.2 | 65.8 | 65.8 | 65.8 | 65.8 | 66.7 |
| 337.5 | 67.1 | 67.1 | 67.5 | 68.3 | 67.1 | 67.5 | 68.8 | 69.2 |

Depth: 982 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 67.9 | 67.5 | 67.9 | 67.1 | 66.7 | 67.9 | 67.9 | 67.5 |
| 22.5 | 67.1 | 66.2 | 66.7 | 66.7 | 67.5 | 66.7 | 66.7 | 66.7 |
| 45.0 | 66.7 | 66.7 | 66.2 | 66.7 | 65.8 | 65.8 | 65.4 | 65.8 |
| 67.5 | 66.7 | 67.1 | 66.7 | 65.4 | 65.0 | 65.4 | 65.0 | 65.0 |
| 90.0 | 65.4 | 65.8 | 66.2 | 66.2 | 65.4 | 65.4 | 65.8 | 64.6 |
| 112.5 | 63.7 | 63.7 | 64.6 | 64.2 | 63.7 | 63.3 | 63.3 | 63.7 |
| 135.0 | 64.2 | 63.3 | 63.3 | 62.9 | 62.9 | 63.7 | 65.0 | 65.0 |
| 157.5 | 63.7 | 63.7 | 64.2 | 64.6 | 65.4 | 65.8 | 65.8 | 64.6 |
| 180.0 | 66.2 | 66.2 | 66.2 | 66.2 | 65.4 | 65.4 | 65.8 | 66.7 |
| 202.5 | 66.2 | 67.1 | 67.1 | 66.2 | 66.2 | 67.1 | 67.5 | 68.3 |
| 225.0 | 69.2 | 67.5 | 67.5 | 67.1 | 67.9 | 67.5 | 67.1 | 67.5 |
| 247.5 | 68.3 | 68.8 | 68.8 | 69.2 | 69.2 | 68.3 | 67.1 | 65.0 |
| 270.0 | 65.8 | 66.7 | 67.9 | 67.9 | 67.9 | 67.1 | 67.5 | 67.9 |
| 292.5 | 67.9 | 67.5 | 67.5 | 67.1 | 66.7 | 67.5 | 67.5 | 67.5 |
| 315.0 | 67.5 | 67.1 | 68.3 | 68.8 | 68.3 | 67.5 | 67.9 | 67.1 |
| 337.5 | 67.5 | 67.9 | 67.5 | 67.9 | 67.1 | 68.3 | 67.1 | 65.8 |

Depth: 984 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 69.2 | 68.8 | 67.9 | 67.9 | 69.6 | 68.3 | 68.8 | 69.6 |
| 22.5 | 70.0 | 69.6 | 68.3 | 66.2 | 67.5 | 68.3 | 69.2 | 67.9 |
| 45.0 | 67.9 | 67.9 | 69.2 | 68.3 | 67.5 | 66.7 | 66.2 | 66.7 |
| 67.5 | 66.7 | 67.9 | 67.5 | 67.5 | 67.1 | 66.7 | 65.8 | 65.8 |
| 90.0 | 65.0 | 66.2 | 64.6 | 64.6 | 65.0 | 65.4 | 65.0 | 64.2 |
| 112.5 | 64.2 | 64.6 | 65.8 | 66.2 | 65.4 | 65.0 | 65.8 | 65.8 |
| 135.0 | 65.4 | 64.6 | 64.2 | 64.2 | 63.3 | 63.3 | 62.5 | 62.5 |
| 157.5 | 61.6 | 62.1 | 62.1 | 61.6 | 62.5 | 62.9 | 61.6 | 62.1 |
| 180.0 | 62.5 | 62.9 | 63.3 | 64.2 | 65.0 | 64.6 | 63.7 | 64.2 |
| 202.5 | 65.0 | 65.8 | 65.8 | 65.4 | 65.4 | 65.4 | 65.4 | 65.4 |
| 225.0 | 64.6 | 63.7 | 64.2 | 65.0 | 65.4 | 65.8 | 66.2 | 65.4 |
| 247.5 | 65.0 | 63.7 | 65.4 | 66.7 | 67.1 | 66.7 | 66.2 | 66.2 |
| 270.0 | 66.2 | 65.4 | 66.7 | 66.2 | 67.1 | 67.9 | 68.8 | 70.0 |
| 292.5 | 69.2 | 68.3 | 67.9 | 66.2 | 63.3 | 64.6 | 67.1 | 67.9 |
| 315.0 | 67.9 | 66.7 | 67.1 | 68.8 | 68.8 | 68.8 | 68.8 | 67.9 |
| 337.5 | 67.9 | 67.9 | 68.8 | 68.8 | 68.8 | 68.3 | 68.3 | 68.3 |

Depth: 986 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 68.3 | 67.9 | 68.3 | 68.3 | 69.2 | 68.3 | 67.9 | 68.3 |
| 22.5 | 69.6 | 70.4 | 70.0 | 69.6 | 68.8 | 68.8 | 68.8 | 69.6 |
| 45.0 | 69.2 | 68.3 | 69.2 | 68.8 | 69.2 | 69.2 | 69.2 | 68.8 |
| 67.5 | 67.9 | 67.9 | 67.1 | 67.5 | 69.2 | 67.9 | 67.9 | 68.3 |
| 90.0 | 68.3 | 68.8 | 68.8 | 67.9 | 67.1 | 67.1 | 67.5 | 67.9 |
| 112.5 | 67.1 | 66.7 | 66.7 | 67.1 | 66.2 | 65.0 | 63.7 | 63.3 |
| 135.0 | 64.2 | 63.7 | 64.2 | 64.2 | 64.6 | 64.6 | 63.7 | 63.7 |
| 157.5 | 65.4 | 66.2 | 65.8 | 66.7 | 65.8 | 65.8 | 65.0 | 65.8 |
| 180.0 | 65.0 | 63.7 | 62.1 | 62.1 | 60.8 | 60.0 | 60.0 | 60.8 |
| 202.5 | 60.4 | 60.0 | 60.0 | 60.4 | 61.2 | 60.0 | 61.2 | 62.1 |
| 225.0 | 62.9 | 62.9 | 64.6 | 64.6 | 64.2 | 65.8 | 63.3 | 65.4 |
| 247.5 | 65.4 | 65.4 | 63.7 | 63.7 | 64.2 | 64.6 | 62.5 | 62.5 |
| 270.0 | 62.1 | 63.3 | 63.7 | 64.2 | 64.2 | 64.2 | 64.2 | 63.7 |
| 292.5 | 62.9 | 63.3 | 65.4 | 64.6 | 64.2 | 64.6 | 64.2 | 65.4 |
| 315.0 | 65.4 | 65.8 | 65.8 | 65.4 | 65.8 | 67.5 | 68.3 | 67.5 |
| 337.5 | 67.1 | 67.9 | 66.7 | 67.1 | 67.9 | 68.8 | 67.9 | 67.9 |

Depth: 988 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 70.0 | 69.2 | 69.6 | 69.6 | 69.6 | 69.2 | 69.2 | 68.8 |
| 22.5 | 68.8 | 68.8 | 68.3 | 67.9 | 68.3 | 68.8 | 69.2 | 69.2 |
| 45.0 | 69.2 | 68.3 | 67.9 | 66.7 | 67.1 | 67.9 | 68.3 | 67.1 |
| 67.5 | 65.4 | 66.2 | 65.0 | 64.2 | 63.3 | 62.5 | 62.5 | 61.6 |
| 90.0 | 62.1 | 62.1 | 61.6 | 62.1 | 62.1 | 61.6 | 62.1 | 63.7 |
| 112.5 | 65.0 | 65.8 | 65.8 | 65.0 | 65.0 | 65.4 | 65.4 | 64.6 |
| 135.0 | 63.3 | 60.0 | 60.0 | 59.1 | 59.5 | 58.7 | 59.1 | 59.5 |
| 157.5 | 58.7 | 58.7 | 59.1 | 58.7 | 59.1 | 59.5 | 61.6 | 62.9 |
| 180.0 | 69.2 | 69.2 | 67.9 | 65.8 | 65.0 | 69.2 | 68.8 | 66.2 |
| 202.5 | 66.2 | 65.8 | 64.6 | 63.7 | 64.6 | 63.7 | 63.3 | 62.1 |
| 225.0 | 61.2 | 61.6 | 61.6 | 61.6 | 61.6 | 61.2 | 61.6 | 61.2 |
| 247.5 | 61.6 | 62.5 | 62.9 | 62.9 | 64.2 | 64.2 | 64.2 | 64.2 |
| 270.0 | 64.6 | 64.6 | 64.2 | 65.8 | 66.2 | 66.7 | 66.7 | 66.2 |
| 292.5 | 67.1 | 67.9 | 68.8 | 69.6 | 68.8 | 67.5 | 67.1 | 67.5 |
| 315.0 | 67.5 | 66.7 | 66.7 | 66.7 | 67.1 | 67.5 | 67.5 | 68.3 |
| 337.5 | 68.8 | 68.8 | 68.8 | 68.3 | 69.2 | 68.8 | 69.6 | 69.6 |

Depth: 990 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 69.6 | 69.6 | 68.3 | 68.3 | 68.3 | 68.3 | 69.2 | 68.3 |
| 22.5 | 68.3 | 68.3 | 67.9 | 67.9 | 67.9 | 68.8 | 68.8 | 69.6 |
| 45.0 | 68.8 | 68.3 | 66.7 | 65.8 | 66.2 | 66.7 | 65.8 | 65.0 |
| 67.5 | 64.2 | 62.1 | 62.1 | 61.2 | 60.0 | 58.3 | 58.7 | 59.1 |
| 90.0 | 59.1 | 59.5 | 60.0 | 59.5 | 58.3 | 59.1 | 60.8 | 61.6 |
| 112.5 | 65.4 | 64.2 | 63.7 | 63.7 | 64.2 | 64.6 | 63.3 | 58.3 |
| 135.0 | 57.0 | 57.4 | 56.6 | 56.6 | 56.6 | 57.4 | 57.4 | 56.6 |
| 157.5 | 56.6 | 57.0 | 57.4 | 57.9 | 57.9 | 58.3 | 58.3 | 59.5 |
| 180.0 | 69.2 | 68.8 | 67.5 | 66.7 | 66.7 | 64.2 | 65.8 | 65.4 |
| 202.5 | 65.0 | 62.9 | 60.4 | 60.8 | 61.2 | 60.4 | 59.5 | 59.5 |
| 225.0 | 60.0 | 60.4 | 60.0 | 60.0 | 59.5 | 59.1 | 59.1 | 60.4 |
| 247.5 | 61.6 | 59.5 | 60.4 | 60.0 | 60.8 | 60.8 | 60.8 | 62.1 |
| 270.0 | 60.8 | 60.8 | 61.6 | 62.9 | 64.6 | 64.6 | 64.6 | 65.0 |
| 292.5 | 66.2 | 67.1 | 67.5 | 66.2 | 64.2 | 65.0 | 65.4 | 66.2 |
| 315.0 | 67.1 | 65.0 | 66.7 | 67.1 | 67.9 | 67.1 | 67.5 | 67.9 |
| 337.5 | 67.1 | 68.3 | 67.1 | 68.3 | 68.3 | 67.5 | 68.8 | 69.2 |

Depth: 992 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 63.3 | 64.6 | 64.6 | 64.2 | 64.6 | 65.4 | 65.4 | 66.2 |
| 22.5 | 66.7 | 67.9 | 70.0 | 69.6 | 69.6 | 70.0 | 70.0 | 70.9 |
| 45.0 | 70.4 | 70.9 | 70.4 | 70.0 | 69.2 | 67.5 | 67.1 | 67.9 |
| 67.5 | 68.8 | 68.8 | 68.8 | 68.8 | 68.8 | 69.2 | 69.2 | 67.9 |
| 90.0 | 68.3 | 68.8 | 68.3 | 68.8 | 68.8 | 69.2 | 67.9 | 67.1 |
| 112.5 | 67.1 | 67.9 | 67.5 | 67.1 | 66.7 | 65.4 | 65.0 | 64.6 |
| 135.0 | 65.0 | 63.7 | 63.7 | 63.7 | 59.1 | 59.5 | 59.5 | 57.4 |
| 157.5 | 57.9 | 57.4 | 57.9 | 57.9 | 57.9 | 58.7 | 60.0 | 64.6 |
| 180.0 | 69.2 | 66.7 | 65.4 | 65.8 | 65.8 | 67.1 | 65.0 | 65.0 |
| 202.5 | 65.0 | 65.0 | 66.2 | 69.2 | 70.9 | 68.8 | 67.5 | 67.5 |
| 225.0 | 67.9 | 69.2 | 68.8 | 69.2 | 55.3 | 55.8 | 56.2 | 56.2 |
| 247.5 | 57.4 | 58.3 | 63.3 | 65.8 | 64.6 | 66.2 | 65.4 | 64.2 |
| 270.0 | 65.0 | 65.8 | 65.8 | 66.2 | 65.4 | 66.2 | 66.7 | 66.7 |
| 292.5 | 65.4 | 58.3 | 59.1 | 59.5 | 59.5 | 59.5 | 58.7 | 58.7 |
| 315.0 | 58.7 | 59.5 | 60.0 | 59.5 | 59.5 | 59.5 | 59.1 | 60.0 |
| 337.5 | 60.0 | 60.0 | 59.5 | 60.4 | 61.2 | 62.9 | 62.9 | 63.3 |

Depth: 994 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 71.3 | 71.3 | 70.0 | 70.4 | 70.4 | 71.3 | 70.4 | 68.3 |
| 22.5 | 69.6 | 70.4 | 71.3 | 71.7 | 71.3 | 69.6 | 69.2 | 69.2 |
| 45.0 | 68.8 | 68.8 | 68.8 | 68.8 | 68.3 | 67.5 | 66.2 | 66.7 |
| 67.5 | 65.8 | 66.2 | 66.7 | 70.4 | 70.0 | 68.8 | 68.8 | 67.9 |
| 90.0 | 68.8 | 69.2 | 68.3 | 67.5 | 68.3 | 68.3 | 70.0 | 69.6 |
| 112.5 | 69.6 | 70.0 | 70.4 | 70.4 | 70.4 | 67.9 | 68.8 | 69.2 |
| 135.0 | 69.6 | 70.0 | 69.2 | 68.8 | 68.8 | 68.3 | 71.7 | 70.9 |
| 157.5 | 68.8 | 68.3 | 68.3 | 69.2 | 68.8 | 68.3 | 68.8 | 69.6 |
| 180.0 | 66.7 | 67.1 | 67.1 | 68.8 | 68.3 | 65.8 | 65.8 | 66.7 |
| 202.5 | 66.7 | 67.5 | 67.1 | 67.5 | 66.7 | 66.2 | 66.7 | 66.7 |
| 225.0 | 66.7 | 67.1 | 64.2 | 63.3 | 62.5 | 62.5 | 62.5 | 62.5 |
| 247.5 | 62.5 | 62.9 | 62.5 | 62.5 | 61.6 | 60.8 | 61.2 | 61.2 |
| 270.0 | 60.4 | 59.5 | 59.5 | 60.0 | 59.1 | 60.4 | 61.2 | 62.5 |
| 292.5 | 64.2 | 64.2 | 63.7 | 63.7 | 62.9 | 63.7 | 64.6 | 65.0 |
| 315.0 | 65.8 | 65.8 | 66.7 | 68.3 | 70.0 | 70.4 | 70.4 | 70.4 |
| 337.5 | 70.0 | 70.0 | 70.0 | 70.9 | 70.9 | 70.9 | 70.9 | 71.3 |

Depth: 996 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 70.4 | 70.9 | 71.3 | 72.1 | 72.5 | 72.1 | 71.3 | 70.9 |
| 22.5 | 71.3 | 71.3 | 70.9 | 70.9 | 70.4 | 70.9 | 70.4 | 70.4 |
| 45.0 | 70.9 | 70.4 | 69.6 | 69.2 | 68.8 | 68.3 | 68.3 | 70.0 |
| 67.5 | 69.6 | 70.0 | 69.6 | 70.4 | 70.9 | 71.7 | 71.3 | 71.3 |
| 90.0 | 70.4 | 70.4 | 71.7 | 71.3 | 71.7 | 70.9 | 70.9 | 70.9 |
| 112.5 | 70.4 | 70.9 | 70.9 | 71.3 | 70.9 | 70.0 | 69.2 | 69.6 |
| 135.0 | 69.6 | 70.0 | 70.0 | 70.0 | 69.6 | 69.6 | 68.8 | 68.8 |
| 157.5 | 68.8 | 68.8 | 68.3 | 68.3 | 68.3 | 67.5 | 68.3 | 68.3 |
| 180.0 | 68.3 | 69.2 | 68.8 | 68.8 | 68.3 | 68.8 | 68.3 | 68.3 |
| 202.5 | 67.5 | 65.8 | 65.8 | 66.2 | 66.7 | 67.1 | 65.4 | 65.0 |
| 225.0 | 65.0 | 65.4 | 65.0 | 64.6 | 64.6 | 65.0 | 62.1 | 62.1 |
| 247.5 | 61.2 | 60.4 | 59.1 | 58.7 | 60.0 | 61.2 | 62.1 | 62.1 |
| 270.0 | 62.5 | 61.2 | 61.6 | 62.5 | 63.3 | 63.7 | 64.2 | 64.2 |
| 292.5 | 64.6 | 65.4 | 67.5 | 70.4 | 70.4 | 70.4 | 69.6 | 68.3 |
| 315.0 | 68.3 | 69.6 | 70.4 | 71.7 | 71.7 | 71.3 | 70.0 | 71.3 |
| 337.5 | 70.9 | 72.1 | 72.1 | 72.1 | 70.9 | 70.4 | 70.4 | 70.4 |

Depth: 998 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 71.7 | 72.5 | 73.4 | 73.4 | 73.0 | 72.1 | 72.1 | 71.7 |
| 22.5 | 71.7 | 72.5 | 72.1 | 71.3 | 71.3 | 71.3 | 70.4 | 71.3 |
| 45.0 | 71.3 | 70.4 | 69.2 | 70.0 | 70.0 | 68.8 | 67.9 | 68.8 |
| 67.5 | 71.7 | 70.9 | 71.3 | 70.4 | 71.7 | 71.7 | 72.1 | 71.7 |
| 90.0 | 70.9 | 71.3 | 71.7 | 71.3 | 71.7 | 71.7 | 72.5 | 71.7 |
| 112.5 | 70.9 | 70.9 | 72.1 | 73.0 | 73.0 | 73.0 | 71.7 | 72.1 |
| 135.0 | 71.7 | 71.7 | 70.4 | 70.4 | 70.0 | 70.0 | 69.2 | 68.8 |
| 157.5 | 68.8 | 68.8 | 69.2 | 68.8 | 68.8 | 68.8 | 68.8 | 68.8 |
| 180.0 | 68.8 | 70.9 | 70.0 | 69.2 | 69.2 | 70.0 | 69.6 | 69.2 |
| 202.5 | 69.2 | 68.8 | 68.8 | 68.8 | 67.9 | 68.3 | 67.5 | 67.5 |
| 225.0 | 67.5 | 67.5 | 67.1 | 66.7 | 66.2 | 66.7 | 64.6 | 65.4 |
| 247.5 | 65.4 | 62.1 | 59.5 | 58.3 | 58.3 | 60.4 | 61.2 | 61.6 |
| 270.0 | 60.8 | 59.5 | 58.7 | 57.9 | 58.3 | 60.0 | 59.5 | 60.8 |
| 292.5 | 61.6 | 61.2 | 63.3 | 66.2 | 69.2 | 70.0 | 70.0 | 68.8 |
| 315.0 | 67.1 | 68.3 | 68.3 | 70.0 | 70.9 | 71.7 | 71.7 | 73.4 |
| 337.5 | 72.5 | 72.5 | 72.5 | 73.0 | 73.0 | 72.1 | 72.5 | 71.7 |

Depth: 1000 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 70.4 | 70.9 | 70.0 | 69.6 | 69.6 | 70.4 | 71.7 | 72.5 |
| 22.5 | 72.1 | 71.7 | 70.9 | 71.3 | 70.9 | 70.4 | 69.6 | 69.2 |
| 45.0 | 69.2 | 69.6 | 68.8 | 68.3 | 68.3 | 68.8 | 69.2 | 70.0 |
| 67.5 | 68.3 | 67.1 | 67.5 | 68.3 | 72.5 | 71.3 | 71.7 | 70.0 |
| 90.0 | 70.0 | 70.4 | 70.0 | 70.0 | 69.6 | 69.2 | 69.6 | 69.6 |
| 112.5 | 70.0 | 70.4 | 71.7 | 71.7 | 71.3 | 71.7 | 72.1 | 72.1 |
| 135.0 | 70.9 | 70.4 | 70.9 | 71.7 | 71.3 | 70.4 | 69.2 | 69.2 |
| 157.5 | 69.2 | 67.9 | 68.3 | 67.1 | 67.9 | 67.9 | 68.8 | 69.2 |
| 180.0 | 69.6 | 68.3 | 68.3 | 68.3 | 68.8 | 69.6 | 69.6 | 69.2 |
| 202.5 | 69.6 | 70.0 | 69.2 | 69.2 | 69.2 | 69.2 | 68.3 | 67.9 |
| 225.0 | 67.9 | 68.3 | 67.9 | 66.7 | 65.8 | 65.8 | 64.2 | 62.9 |
| 247.5 | 62.9 | 62.1 | 61.2 | 59.1 | 58.7 | 57.0 | 55.8 | 55.8 |
| 270.0 | 55.8 | 55.8 | 58.3 | 59.5 | 59.5 | 57.0 | 56.6 | 57.0 |
| 292.5 | 57.0 | 57.9 | 58.7 | 58.7 | 59.1 | 60.8 | 61.6 | 63.3 |
| 315.0 | 65.8 | 68.3 | 67.9 | 67.1 | 66.7 | 67.5 | 68.3 | 67.9 |
| 337.5 | 69.2 | 69.2 | 70.0 | 70.4 | 70.9 | 71.3 | 71.7 | 71.3 |

Depth: 1002 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 69.6 | 68.8 | 69.2 | 70.9 | 70.4 | 70.9 | 70.4 | 70.9 |
| 22.5 | 70.9 | 70.9 | 70.4 | 70.0 | 66.7 | 67.5 | 68.8 | 68.8 |
| 45.0 | 68.3 | 67.9 | 67.5 | 66.7 | 66.7 | 67.1 | 65.4 | 65.8 |
| 67.5 | 66.2 | 69.2 | 70.0 | 70.4 | 68.8 | 68.8 | 70.0 | 70.4 |
| 90.0 | 69.6 | 67.9 | 68.8 | 68.3 | 69.2 | 69.2 | 68.8 | 70.4 |
| 112.5 | 69.6 | 70.0 | 70.0 | 69.6 | 70.0 | 69.6 | 68.8 | 69.6 |
| 135.0 | 70.4 | 70.9 | 70.0 | 69.6 | 68.3 | 68.8 | 68.8 | 68.3 |
| 157.5 | 68.3 | 68.8 | 67.9 | 68.3 | 68.8 | 69.6 | 68.3 | 67.9 |
| 180.0 | 67.5 | 67.9 | 67.9 | 67.5 | 67.9 | 68.3 | 69.6 | 69.2 |
| 202.5 | 66.7 | 66.7 | 67.1 | 66.7 | 67.1 | 67.1 | 67.1 | 67.1 |
| 225.0 | 65.4 | 65.0 | 64.2 | 64.2 | 63.3 | 62.9 | 62.9 | 62.1 |
| 247.5 | 62.1 | 59.5 | 58.3 | 57.4 | 55.3 | 55.3 | 55.3 | 56.2 |
| 270.0 | 57.4 | 57.9 | 57.9 | 57.4 | 57.0 | 56.6 | 56.6 | 56.6 |
| 292.5 | 56.6 | 57.0 | 56.2 | 58.3 | 58.7 | 60.0 | 63.3 | 65.8 |
| 315.0 | 67.1 | 67.5 | 67.5 | 67.9 | 69.2 | 69.2 | 68.3 | 69.6 |
| 337.5 | 70.9 | 70.9 | 70.9 | 70.4 | 70.9 | 71.3 | 69.2 | 69.6 |

Depth: 1004 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 70.9 | 70.4 | 69.2 | 69.2 | 68.8 | 69.6 | 69.6 | 68.8 |
| 22.5 | 69.6 | 69.6 | 70.0 | 70.0 | 70.0 | 69.2 | 69.6 | 68.8 |
| 45.0 | 68.8 | 68.8 | 67.9 | 68.8 | 70.0 | 70.9 | 70.9 | 68.3 |
| 67.5 | 67.9 | 66.7 | 66.2 | 67.1 | 66.2 | 66.7 | 69.2 | 69.2 |
| 90.0 | 69.2 | 68.3 | 67.9 | 69.2 | 70.0 | 69.6 | 67.9 | 67.5 |
| 112.5 | 67.9 | 69.2 | 69.2 | 69.2 | 69.2 | 69.2 | 68.3 | 68.8 |
| 135.0 | 68.8 | 68.8 | 68.3 | 67.9 | 68.3 | 68.8 | 70.0 | 69.6 |
| 157.5 | 68.3 | 66.7 | 67.1 | 69.6 | 69.6 | 69.6 | 70.9 | 68.3 |
| 180.0 | 68.3 | 69.6 | 70.0 | 70.0 | 69.2 | 67.9 | 67.1 | 67.1 |
| 202.5 | 67.1 | 67.1 | 68.3 | 68.3 | 69.6 | 68.8 | 67.5 | 67.1 |
| 225.0 | 66.7 | 67.1 | 67.1 | 66.7 | 65.8 | 65.0 | 63.3 | 63.7 |
| 247.5 | 63.3 | 63.3 | 62.5 | 62.1 | 61.6 | 61.6 | 61.6 | 60.0 |
| 270.0 | 58.7 | 57.0 | 56.6 | 56.2 | 56.2 | 56.6 | 56.6 | 57.0 |
| 292.5 | 57.0 | 56.6 | 56.6 | 57.0 | 57.0 | 56.2 | 54.9 | 54.5 |
| 315.0 | 54.1 | 55.3 | 57.4 | 58.3 | 63.3 | 63.7 | 66.2 | 68.3 |
| 337.5 | 68.3 | 68.8 | 68.8 | 69.2 | 68.8 | 68.8 | 69.6 | 69.6 |

Depth: 1006 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 69.2 | 69.6 | 69.2 | 69.6 | 69.6 | 68.3 | 69.2 | 69.6 |
| 22.5 | 70.4 | 70.4 | 70.0 | 70.9 | 70.9 | 69.6 | 69.2 | 68.8 |
| 45.0 | 68.3 | 68.3 | 67.9 | 68.8 | 68.8 | 70.9 | 70.0 | 67.9 |
| 67.5 | 67.1 | 65.4 | 65.4 | 65.4 | 64.6 | 66.2 | 67.1 | 67.1 |
| 90.0 | 67.5 | 67.5 | 68.3 | 68.8 | 68.3 | 66.7 | 65.8 | 65.0 |
| 112.5 | 65.8 | 65.8 | 65.8 | 64.2 | 65.0 | 66.7 | 66.7 | 67.1 |
| 135.0 | 65.4 | 65.4 | 65.8 | 65.8 | 66.2 | 68.3 | 68.8 | 67.9 |
| 157.5 | 65.8 | 65.4 | 66.2 | 68.8 | 68.8 | 70.0 | 67.1 | 66.7 |
| 180.0 | 68.3 | 70.4 | 70.4 | 69.6 | 67.1 | 65.0 | 65.0 | 64.2 |
| 202.5 | 66.2 | 68.8 | 68.8 | 68.8 | 67.1 | 66.2 | 65.8 | 66.2 |
| 225.0 | 66.2 | 65.8 | 65.4 | 66.2 | 62.5 | 61.6 | 60.4 | 60.8 |
| 247.5 | 61.2 | 60.4 | 60.4 | 59.5 | 59.5 | 58.3 | 57.9 | 57.0 |
| 270.0 | 56.2 | 54.9 | 54.1 | 54.5 | 54.5 | 55.3 | 55.3 | 55.3 |
| 292.5 | 54.9 | 54.5 | 54.1 | 53.7 | 53.3 | 51.2 | 51.2 | 52.8 |
| 315.0 | 53.7 | 54.1 | 54.9 | 58.3 | 63.7 | 65.8 | 68.3 | 68.3 |
| 337.5 | 67.9 | 67.5 | 67.9 | 67.5 | 67.9 | 67.9 | 69.6 | 69.2 |

Depth: 1008 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 70.4 | 70.0 | 69.2 | 68.8 | 68.8 | 68.8 | 68.8 | 69.6 |
| 22.5 | 70.0 | 70.4 | 70.4 | 70.9 | 70.0 | 68.8 | 66.7 | 65.4 |
| 45.0 | 65.4 | 65.8 | 66.7 | 67.9 | 67.1 | 64.6 | 62.5 | 62.5 |
| 67.5 | 62.5 | 62.5 | 62.5 | 63.3 | 63.7 | 66.7 | 68.3 | 68.8 |
| 90.0 | 68.8 | 68.8 | 68.8 | 69.6 | 68.8 | 68.3 | 68.3 | 68.8 |
| 112.5 | 69.2 | 69.6 | 70.0 | 70.0 | 70.0 | 70.4 | 70.4 | 70.9 |
| 135.0 | 70.9 | 71.3 | 71.3 | 71.7 | 71.3 | 71.7 | 72.1 | 71.7 |
| 157.5 | 71.7 | 71.3 | 70.9 | 70.4 | 70.0 | 70.0 | 70.4 | 70.9 |
| 180.0 | 71.3 | 71.3 | 70.9 | 70.4 | 70.0 | 69.6 | 69.2 | 68.8 |
| 202.5 | 68.3 | 67.9 | 67.5 | 67.1 | 65.8 | 65.8 | 66.2 | 65.8 |
| 225.0 | 65.0 | 64.2 | 62.1 | 60.0 | 60.0 | 60.0 | 60.0 | 60.0 |
| 247.5 | 59.5 | 58.7 | 57.9 | 57.0 | 56.2 | 55.3 | 54.5 | 54.1 |
| 270.0 | 53.7 | 53.3 | 54.1 | 53.7 | 53.3 | 52.8 | 52.4 | 50.7 |
| 292.5 | 50.7 | 49.5 | 49.5 | 48.6 | 48.2 | 47.8 | 48.6 | 49.9 |
| 315.0 | 52.0 | 53.7 | 54.9 | 60.8 | 64.2 | 67.5 | 67.9 | 67.1 |
| 337.5 | 67.5 | 67.5 | 68.8 | 68.3 | 68.8 | 69.6 | 70.0 | 70.4 |

Depth: 1010 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 69.6 | 69.6 | 70.4 | 70.9 | 71.3 | 73.0 | 73.8 | 73.0 |
| 22.5 | 73.0 | 72.5 | 70.9 | 68.8 | 68.8 | 67.9 | 66.7 | 66.7 |
| 45.0 | 67.5 | 67.1 | 68.8 | 67.5 | 64.6 | 61.6 | 60.8 | 60.4 |
| 67.5 | 60.8 | 61.2 | 69.6 | 75.5 | 74.6 | 74.6 | 73.8 | 74.2 |
| 90.0 | 74.2 | 74.6 | 75.5 | 74.6 | 75.5 | 75.5 | 75.5 | 75.5 |
| 112.5 | 75.5 | 75.9 | 75.1 | 74.6 | 74.6 | 74.6 | 74.6 | 74.6 |
| 135.0 | 74.6 | 74.2 | 75.1 | 75.1 | 75.1 | 75.1 | 75.1 | 73.8 |
| 157.5 | 73.8 | 73.4 | 73.4 | 73.8 | 75.1 | 73.4 | 73.4 | 72.5 |
| 180.0 | 73.4 | 72.1 | 72.5 | 72.1 | 72.1 | 71.7 | 71.3 | 70.4 |
| 202.5 | 70.4 | 70.4 | 70.0 | 70.0 | 70.0 | 70.9 | 70.0 | 70.9 |
| 225.0 | 70.9 | 69.2 | 67.1 | 65.8 | 65.4 | 67.1 | 68.8 | 70.0 |
| 247.5 | 70.9 | 69.6 | 69.6 | 70.4 | 69.6 | 67.9 | 67.1 | 65.8 |
| 270.0 | 62.5 | 59.1 | 56.6 | 54.1 | 53.3 | 51.2 | 50.3 | 49.9 |
| 292.5 | 50.3 | 47.0 | 46.1 | 45.3 | 44.4 | 47.0 | 48.2 | 48.6 |
| 315.0 | 51.2 | 52.4 | 54.5 | 57.0 | 60.8 | 61.6 | 62.9 | 65.4 |
| 337.5 | 67.5 | 67.5 | 68.3 | 69.6 | 68.3 | 70.0 | 69.2 | 69.6 |

Depth: 1012 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 63.3 | 63.3 | 62.9 | 62.5 | 63.3 | 63.3 | 63.7 | 65.0 |
| 22.5 | 63.7 | 63.7 | 62.5 | 63.3 | 63.7 | 66.7 | 67.5 | 71.7 |
| 45.0 | 71.3 | 70.4 | 71.7 | 72.5 | 74.6 | 74.6 | 73.4 | 72.1 |
| 67.5 | 72.1 | 72.5 | 73.0 | 72.5 | 72.1 | 72.1 | 71.3 | 72.5 |
| 90.0 | 73.0 | 73.0 | 73.8 | 74.6 | 74.2 | 74.2 | 74.2 | 74.6 |
| 112.5 | 74.2 | 74.2 | 74.2 | 73.4 | 74.2 | 73.4 | 73.8 | 73.4 |
| 135.0 | 72.5 | 72.5 | 73.8 | 74.2 | 74.6 | 74.6 | 73.8 | 73.0 |
| 157.5 | 73.0 | 73.0 | 71.7 | 71.7 | 70.9 | 72.1 | 70.4 | 70.9 |
| 180.0 | 71.3 | 71.7 | 71.3 | 70.4 | 70.9 | 70.4 | 70.9 | 70.0 |
| 202.5 | 70.0 | 70.9 | 69.6 | 69.2 | 69.6 | 70.4 | 69.2 | 70.0 |
| 225.0 | 70.0 | 68.3 | 66.7 | 63.7 | 63.3 | 65.8 | 67.9 | 68.8 |
| 247.5 | 70.0 | 69.6 | 68.8 | 70.0 | 69.2 | 68.8 | 67.5 | 65.8 |
| 270.0 | 64.2 | 61.2 | 60.0 | 57.4 | 54.9 | 49.1 | 45.3 | 44.4 |
| 292.5 | 43.6 | 43.6 | 42.3 | 41.1 | 40.7 | 41.9 | 44.0 | 44.9 |
| 315.0 | 47.8 | 49.1 | 52.4 | 54.5 | 56.2 | 59.5 | 61.2 | 62.1 |
| 337.5 | 62.1 | 61.6 | 62.9 | 63.3 | 62.5 | 62.9 | 62.1 | 62.5 |

Depth: 1014 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 61.6 | 60.8 | 61.6 | 61.6 | 62.5 | 61.2 | 62.1 | 62.1 |
| 22.5 | 63.3 | 61.6 | 61.6 | 62.5 | 62.9 | 63.7 | 67.5 | 70.4 |
| 45.0 | 70.4 | 70.4 | 71.3 | 72.5 | 73.0 | 72.5 | 72.1 | 72.1 |
| 67.5 | 73.4 | 72.5 | 72.5 | 71.7 | 72.1 | 71.3 | 71.7 | 70.9 |
| 90.0 | 70.0 | 70.4 | 71.7 | 70.9 | 70.9 | 72.5 | 72.1 | 71.3 |
| 112.5 | 71.7 | 71.7 | 70.4 | 71.7 | 72.1 | 72.1 | 71.3 | 71.3 |
| 135.0 | 70.0 | 71.7 | 72.1 | 71.7 | 71.7 | 72.1 | 71.3 | 70.4 |
| 157.5 | 69.6 | 67.9 | 67.5 | 68.3 | 67.9 | 67.1 | 66.2 | 64.6 |
| 180.0 | 66.2 | 67.5 | 67.5 | 67.9 | 67.5 | 68.3 | 67.1 | 64.2 |
| 202.5 | 62.9 | 62.5 | 65.0 | 65.8 | 69.2 | 68.3 | 69.2 | 58.7 |
| 225.0 | 59.1 | 57.9 | 57.9 | 60.4 | 62.1 | 62.9 | 65.4 | 66.2 |
| 247.5 | 67.1 | 67.9 | 67.5 | 67.5 | 66.2 | 65.0 | 64.6 | 62.5 |
| 270.0 | 59.5 | 52.8 | 52.4 | 47.0 | 45.3 | 42.3 | 41.9 | 41.1 |
| 292.5 | 41.1 | 41.1 | 41.1 | 39.0 | 39.0 | 40.3 | 41.9 | 43.6 |
| 315.0 | 44.9 | 46.1 | 47.4 | 51.6 | 54.5 | 56.2 | 57.9 | 59.5 |
| 337.5 | 59.5 | 59.5 | 60.8 | 61.2 | 61.6 | 61.6 | 61.2 | 62.1 |

Depth: 1016 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 58.7 | 59.5 | 59.5 | 58.7 | 58.3 | 58.3 | 58.3 | 58.3 |
| 22.5 | 58.3 | 59.1 | 59.1 | 60.0 | 59.5 | 60.0 | 60.0 | 60.0 |
| 45.0 | 60.4 | 61.2 | 61.2 | 61.2 | 61.6 | 63.7 | 68.3 | 68.8 |
| 67.5 | 68.8 | 68.3 | 67.5 | 67.9 | 68.3 | 68.8 | 68.8 | 68.8 |
| 90.0 | 67.9 | 67.1 | 67.9 | 68.8 | 69.2 | 69.2 | 70.0 | 70.0 |
| 112.5 | 70.0 | 70.4 | 70.9 | 70.9 | 70.9 | 70.4 | 71.3 | 70.4 |
| 135.0 | 71.7 | 71.3 | 71.7 | 71.3 | 68.3 | 68.3 | 68.8 | 69.6 |
| 157.5 | 67.1 | 64.2 | 62.5 | 60.4 | 62.1 | 63.7 | 63.3 | 62.5 |
| 180.0 | 62.1 | 61.6 | 61.2 | 62.9 | 64.6 | 66.2 | 63.7 | 62.1 |
| 202.5 | 60.8 | 59.5 | 60.4 | 60.0 | 59.5 | 59.5 | 59.5 | 59.1 |
| 225.0 | 58.7 | 56.6 | 56.2 | 56.2 | 55.8 | 57.4 | 58.3 | 61.2 |
| 247.5 | 63.3 | 63.7 | 65.8 | 65.8 | 65.0 | 62.9 | 62.1 | 60.8 |
| 270.0 | 60.0 | 57.0 | 54.1 | 51.6 | 46.5 | 41.1 | 40.3 | 39.0 |
| 292.5 | 39.0 | 39.8 | 38.6 | 36.9 | 36.5 | 34.0 | 34.4 | 34.0 |
| 315.0 | 34.8 | 35.2 | 35.2 | 40.7 | 45.7 | 47.8 | 48.2 | 52.8 |
| 337.5 | 54.1 | 57.0 | 57.9 | 57.9 | 57.9 | 58.3 | 58.7 | 58.7 |

Depth: 1018 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 55.8 | 55.8 | 55.3 | 55.8 | 54.9 | 55.3 | 55.3 | 55.3 |
| 22.5 | 55.8 | 55.3 | 55.3 | 56.6 | 57.4 | 56.6 | 56.2 | 56.6 |
| 45.0 | 57.4 | 57.9 | 59.1 | 59.5 | 59.5 | 59.1 | 67.1 | 66.7 |
| 67.5 | 67.5 | 67.5 | 67.1 | 66.2 | 64.6 | 63.7 | 64.2 | 66.2 |
| 90.0 | 66.7 | 66.7 | 66.7 | 66.7 | 67.9 | 68.3 | 66.7 | 65.8 |
| 112.5 | 65.0 | 64.2 | 63.3 | 60.0 | 60.8 | 63.3 | 63.3 | 62.1 |
| 135.0 | 61.6 | 62.5 | 60.8 | 60.8 | 59.5 | 60.8 | 62.5 | 61.6 |
| 157.5 | 58.7 | 58.7 | 58.7 | 57.9 | 58.7 | 58.7 | 59.5 | 57.9 |
| 180.0 | 57.4 | 57.9 | 57.9 | 57.0 | 57.0 | 57.0 | 57.4 | 56.6 |
| 202.5 | 56.2 | 57.4 | 56.2 | 55.3 | 56.6 | 57.0 | 55.8 | 54.9 |
| 225.0 | 53.7 | 52.4 | 52.0 | 52.8 | 52.4 | 54.5 | 56.6 | 60.0 |
| 247.5 | 62.5 | 62.9 | 63.3 | 62.5 | 60.8 | 60.0 | 59.1 | 57.4 |
| 270.0 | 55.3 | 51.6 | 51.2 | 40.3 | 39.0 | 37.7 | 36.9 | 36.9 |
| 292.5 | 34.8 | 34.0 | 33.1 | 32.7 | 32.7 | 31.0 | 31.0 | 30.6 |
| 315.0 | 30.2 | 32.7 | 37.7 | 38.6 | 40.7 | 46.5 | 47.4 | 48.2 |
| 337.5 | 50.3 | 52.0 | 53.7 | 55.8 | 54.9 | 55.3 | 55.8 | 55.8 |

Depth: 1020 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 52.8 | 52.8 | 52.8 | 52.8 | 52.8 | 52.0 | 51.2 | 52.0 |
| 22.5 | 52.4 | 52.0 | 52.0 | 52.8 | 53.7 | 54.5 | 53.7 | 53.3 |
| 45.0 | 53.7 | 54.1 | 54.9 | 54.5 | 56.6 | 56.6 | 54.9 | 55.3 |
| 67.5 | 54.9 | 55.8 | 55.8 | 55.8 | 55.8 | 56.6 | 57.4 | 59.1 |
| 90.0 | 59.1 | 58.3 | 58.3 | 58.3 | 58.3 | 57.9 | 55.8 | 55.3 |
| 112.5 | 56.6 | 56.6 | 56.2 | 57.4 | 57.4 | 57.0 | 57.4 | 57.4 |
| 135.0 | 58.3 | 59.1 | 59.1 | 59.1 | 58.3 | 57.9 | 57.4 | 56.6 |
| 157.5 | 55.8 | 55.3 | 54.5 | 54.5 | 52.8 | 55.3 | 55.3 | 54.9 |
| 180.0 | 54.5 | 55.3 | 54.9 | 54.5 | 55.3 | 54.9 | 54.1 | 54.1 |
| 202.5 | 54.5 | 54.1 | 54.1 | 54.1 | 53.7 | 52.8 | 54.5 | 52.8 |
| 225.0 | 52.4 | 52.4 | 50.7 | 49.9 | 49.5 | 49.1 | 51.2 | 51.6 |
| 247.5 | 53.3 | 55.8 | 58.3 | 60.0 | 60.4 | 60.4 | 60.4 | 58.7 |
| 270.0 | 49.9 | 49.9 | 49.1 | 40.3 | 37.7 | 36.9 | 35.2 | 34.4 |
| 292.5 | 33.1 | 32.3 | 30.6 | 30.2 | 29.4 | 28.1 | 28.1 | 28.1 |
| 315.0 | 28.9 | 28.1 | 28.1 | 26.8 | 26.8 | 32.7 | 36.9 | 44.0 |
| 337.5 | 45.3 | 46.1 | 47.8 | 49.1 | 51.6 | 52.4 | 52.0 | 52.4 |

Depth: 1022 Tilt: 0 Range: 99.4 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 47.4 | 47.8 | 47.8 | 46.5 | 46.5 | 46.5 | 46.1 | 47.0 |
| 22.5 | 47.0 | 47.8 | 47.8 | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 |
| 45.0 | 49.1 | 49.1 | 49.5 | 49.5 | 49.5 | 48.2 | 48.2 | 47.8 |
| 67.5 | 47.8 | 47.8 | 47.8 | 49.1 | 49.1 | 49.1 | 49.1 | 50.7 |
| 90.0 | 51.6 | 52.0 | 52.4 | 52.8 | 53.3 | 53.3 | 53.3 | 53.3 |
| 112.5 | 53.3 | 52.8 | 52.8 | 52.0 | 52.0 | 52.0 | 52.4 | 52.0 |
| 135.0 | 52.0 | 52.0 | 52.0 | 52.8 | 52.8 | 54.1 | 54.1 | 54.1 |
| 157.5 | 54.5 | 54.5 | 53.7 | 54.1 | 54.5 | 54.1 | 54.1 | 54.5 |
| 180.0 | 54.5 | 53.3 | 53.3 | 53.3 | 52.8 | 52.4 | 52.0 | 51.6 |
| 202.5 | 52.0 | 52.4 | 52.8 | 52.8 | 52.0 | 51.6 | 50.7 | 50.7 |
| 225.0 | 50.7 | 50.7 | 50.7 | 49.9 | 49.9 | 49.9 | 49.9 | 49.9 |
| 247.5 | 49.5 | 49.5 | 49.5 | 49.5 | 49.5 | 48.2 | 48.2 | 47.4 |
| 270.0 | 47.4 | 47.4 | 48.6 | 49.1 | 50.3 | 52.0 | 51.6 | 51.2 |
| 292.5 | 50.3 | 49.1 | 49.1 | 48.2 | 47.0 | 47.0 | 47.0 | 47.0 |
| 315.0 | 47.0 | 92.2 | 94.3 | 95.6 | 95.6 | 95.6 | 94.8 | 95.6 |
| 337.5 | 94.8 | 93.9 | 93.1 | 91.8 | 90.6 | 88.5 | 48.6 | 47.4 |

Depth: 1024 Tilt: 0 Range: 120.0 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 95.2 | 96.7 | 39.0 | 38.5 | 39.0 | 38.5 | 42.0 | 42.5 |
| 22.5 | 42.5 | 42.5 | 42.5 | 44.0 | 43.0 | 44.0 | 45.0 | 47.1 |
| 45.0 | 46.1 | 45.6 | 43.5 | 43.0 | 43.0 | 43.0 | 43.5 | 44.5 |
| 67.5 | 45.6 | 46.1 | 46.6 | 46.6 | 47.6 | 47.1 | 47.1 | 49.1 |
| 90.0 | 49.1 | 49.1 | 48.6 | 48.6 | 49.6 | 49.6 | 49.1 | 49.1 |
| 112.5 | 50.1 | 50.1 | 50.1 | 49.1 | 49.1 | 49.1 | 48.6 | 48.6 |
| 135.0 | 49.1 | 49.1 | 49.1 | 48.6 | 49.6 | 50.1 | 51.1 | 51.6 |
| 157.5 | 52.1 | 52.1 | 51.6 | 51.6 | 50.6 | 50.6 | 51.1 | 51.1 |
| 180.0 | 49.6 | 49.6 | 49.1 | 49.1 | 48.1 | 48.1 | 47.1 | 47.1 |
| 202.5 | 47.1 | 48.6 | 49.1 | 49.6 | 49.6 | 49.6 | 48.6 | 48.1 |
| 225.0 | 48.6 | 48.1 | 48.1 | 47.1 | 48.1 | 47.6 | 47.6 | 48.1 |
| 247.5 | 44.5 | 44.5 | 44.0 | 44.5 | 42.5 | 42.0 | 42.0 | 42.0 |
| 270.0 | 42.0 | 42.0 | 43.5 | 45.0 | 45.0 | 48.1 | 49.6 | 48.6 |
| 292.5 | 48.6 | 48.6 | 47.6 | 47.6 | 46.6 | 95.7 | 96.2 | 96.2 |
| 315.0 | 95.7 | 96.2 | 96.2 | 97.2 | 97.2 | 97.2 | 97.7 | 98.7 |
| 337.5 | 98.7 | 97.2 | 94.7 | 94.1 | 93.1 | 93.6 | 94.7 | 94.7 |

Depth: 1026 Tilt: 0 Range: 120.0 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 35.4 | 35.4 | 35.9 | 36.9 | 38.5 | 38.0 | 38.0 | 38.5 |
| 22.5 | 38.0 | 41.0 | 41.0 | 42.0 | 43.0 | 42.0 | 41.5 | 41.5 |
| 45.0 | 38.5 | 39.0 | 39.5 | 40.0 | 39.0 | 40.0 | 43.0 | 43.0 |
| 67.5 | 42.5 | 43.0 | 44.5 | 45.0 | 44.0 | 44.0 | 43.0 | 43.5 |
| 90.0 | 45.0 | 45.6 | 44.5 | 45.0 | 45.0 | 45.0 | 45.0 | 44.5 |
| 112.5 | 45.0 | 45.0 | 45.0 | 45.6 | 45.6 | 45.0 | 44.0 | 44.0 |
| 135.0 | 45.6 | 45.6 | 45.6 | 46.6 | 47.1 | 47.6 | 47.1 | 47.6 |
| 157.5 | 47.6 | 48.1 | 47.1 | 45.6 | 46.1 | 45.6 | 46.6 | 45.6 |
| 180.0 | 45.0 | 45.0 | 46.1 | 45.0 | 45.0 | 44.5 | 45.0 | 45.0 |
| 202.5 | 44.5 | 45.0 | 45.6 | 44.5 | 44.5 | 44.0 | 43.5 | 43.5 |
| 225.0 | 43.0 | 43.5 | 42.0 | 40.5 | 40.5 | 40.5 | 40.0 | 39.5 |
| 247.5 | 39.0 | 38.5 | 38.5 | 38.5 | 39.0 | 39.5 | 39.0 | 39.0 |
| 270.0 | 38.5 | 39.0 | 39.5 | 40.0 | 40.0 | 40.0 | 40.0 | 39.0 |
| 292.5 | 37.5 | 36.4 | 36.4 | 35.4 | 35.4 | 95.2 | 96.2 | 96.2 |
| 315.0 | 97.7 | 99.2 | 100.7 | 101.2 | 101.2 | 100.2 | 96.2 | 95.7 |
| 337.5 | 95.7 | 95.2 | 95.2 | 95.2 | 94.1 | 93.6 | 35.9 | 34.9 |

Depth: 1028 Tilt: 0 Range: 120.0 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 33.4 | 32.9 | 31.9 | 31.9 | 30.4 | 30.9 | 31.9 | 32.9 |
| 22.5 | 32.9 | 33.4 | 32.9 | 32.4 | 31.9 | 31.9 | 32.4 | 31.9 |
| 45.0 | 30.9 | 27.8 | 28.9 | 29.9 | 32.9 | 35.4 | 34.4 | 36.4 |
| 67.5 | 38.0 | 38.0 | 38.0 | 38.5 | 39.5 | 39.0 | 36.4 | 36.4 |
| 90.0 | 38.0 | 39.5 | 41.0 | 40.5 | 40.5 | 41.0 | 41.5 | 41.0 |
| 112.5 | 40.5 | 41.0 | 42.0 | 42.0 | 42.0 | 42.0 | 41.5 | 41.5 |
| 135.0 | 41.0 | 41.5 | 42.0 | 42.0 | 42.0 | 42.0 | 42.0 | 43.0 |
| 157.5 | 42.5 | 44.0 | 43.0 | 43.5 | 44.5 | 43.5 | 43.5 | 43.5 |
| 180.0 | 43.5 | 43.0 | 43.0 | 42.5 | 42.0 | 41.5 | 42.5 | 41.5 |
| 202.5 | 41.5 | 41.5 | 41.0 | 41.5 | 41.5 | 40.0 | 40.5 | 39.5 |
| 225.0 | 38.5 | 39.0 | 38.0 | 38.0 | 37.5 | 36.4 | 36.4 | 35.9 |
| 247.5 | 35.9 | 36.4 | 36.9 | 36.9 | 36.4 | 35.9 | 35.9 | 35.4 |
| 270.0 | 35.9 | 34.9 | 33.9 | 34.4 | 31.4 | 31.4 | 31.4 | 33.4 |
| 292.5 | 33.4 | 32.9 | 28.9 | 29.4 | 29.9 | 28.3 | 27.8 | 28.3 |
| 315.0 | 29.9 | 29.4 | 29.9 | 29.9 | 29.9 | 29.9 | 94.1 | 94.1 |
| 337.5 | 94.1 | 94.1 | 94.1 | 94.1 | 94.1 | 32.9 | 32.9 | 32.9 |

Depth: 1030 Tilt: 0 Range: 120.0 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 29.4 | 28.3 | 28.9 | 27.8 | 29.4 | 29.4 | 29.4 | 29.4 |
| 22.5 | 31.4 | 30.9 | 30.9 | 29.4 | 29.4 | 30.4 | 29.9 | 29.4 |
| 45.0 | 28.9 | 27.8 | 27.8 | 27.8 | 28.3 | 27.3 | 29.4 | 30.9 |
| 67.5 | 30.9 | 31.9 | 33.4 | 33.4 | 33.9 | 34.9 | 35.4 | 35.4 |
| 90.0 | 35.9 | 35.4 | 36.9 | 36.9 | 35.9 | 36.4 | 36.4 | 36.4 |
| 112.5 | 38.0 | 36.9 | 37.5 | 36.4 | 36.4 | 36.9 | 35.9 | 36.4 |
| 135.0 | 35.9 | 35.9 | 36.9 | 37.5 | 37.5 | 37.5 | 39.0 | 38.0 |
| 157.5 | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 | 37.5 | 38.0 |
| 180.0 | 38.0 | 38.5 | 38.5 | 39.0 | 39.0 | 38.5 | 39.0 | 38.5 |
| 202.5 | 38.5 | 36.9 | 36.9 | 36.9 | 36.9 | 38.0 | 37.5 | 37.5 |
| 225.0 | 36.9 | 35.9 | 34.4 | 33.9 | 33.4 | 33.4 | 32.4 | 31.4 |
| 247.5 | 31.4 | 31.4 | 32.9 | 32.9 | 31.9 | 31.4 | 32.4 | 32.4 |
| 270.0 | 31.9 | 31.4 | 29.9 | 29.9 | 29.9 | 28.3 | 28.3 | 27.8 |
| 292.5 | 26.3 | 25.8 | 26.8 | 26.3 | 25.8 | 25.3 | 24.8 | 24.3 |
| 315.0 | 25.8 | 26.8 | 26.3 | 26.8 | 26.8 | 26.3 | 26.3 | 64.3 |
| 337.5 | 65.8 | 67.3 | 67.3 | 65.8 | 64.3 | 32.9 | 31.4 | 30.9 |

Depth: 1032 Tilt: 0 Range: 59.6 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 25.7 | 25.7 | 25.9 | 25.9 | 26.2 | 26.2 | 26.4 | 27.2 |
| 22.5 | 27.7 | 28.2 | 28.2 | 29.4 | 29.9 | 30.2 | 29.7 | 29.9 |
| 45.0 | 30.9 | 32.0 | 32.0 | 33.0 | 32.5 | 32.0 | 32.0 | 32.0 |
| 67.5 | 30.9 | 32.0 | 31.2 | 30.9 | 30.9 | 31.4 | 32.0 | 32.0 |
| 90.0 | 33.2 | 33.5 | 32.7 | 33.5 | 34.2 | 34.0 | 32.0 | 31.7 |
| 112.5 | 32.0 | 32.0 | 32.2 | 33.5 | 34.0 | 34.5 | 34.5 | 34.0 |
| 135.0 | 34.2 | 34.5 | 35.0 | 34.5 | 35.0 | 34.5 | 34.5 | 34.5 |
| 157.5 | 35.0 | 35.0 | 34.2 | 35.0 | 36.2 | 35.5 | 35.7 | 36.0 |
| 180.0 | 35.2 | 32.7 | 32.0 | 32.0 | 31.2 | 29.4 | 28.9 | 28.7 |
| 202.5 | 28.2 | 28.2 | 28.7 | 28.7 | 27.7 | 27.9 | 26.9 | 27.2 |
| 225.0 | 26.9 | 26.7 | 26.9 | 25.9 | 25.2 | 25.2 | 24.9 | 23.9 |
| 247.5 | 23.4 | 21.4 | 21.4 | 21.4 | 21.9 | 21.9 | 22.4 | 22.4 |
| 270.0 | 22.9 | 21.9 | 21.9 | 22.4 | 22.9 | 23.9 | 23.9 | 24.4 |
| 292.5 | 24.9 | 25.7 | 25.7 | 25.7 | 25.7 | 25.2 | 25.4 | 24.9 |
| 315.0 | 25.2 | 23.9 | 23.4 | 23.9 | 22.9 | 21.9 | 21.4 | 20.4 |
| 337.5 | 20.4 | 20.4 | 20.1 | 20.4 | 25.4 | 25.2 | 24.4 | 24.4 |

Depth: 1034 Tilt: 0 Range: 59.6 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 22.4 | 22.9 | 23.9 | 24.9 | 24.9 | 25.2 | 25.9 | 25.9 |
| 22.5 | 25.9 | 26.2 | 26.2 | 26.4 | 26.4 | 26.4 | 26.9 | 26.9 |
| 45.0 | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 27.9 | 27.4 |
| 67.5 | 28.2 | 27.9 | 27.9 | 27.9 | 28.2 | 27.9 | 27.9 | 27.9 |
| 90.0 | 28.2 | 28.2 | 28.9 | 29.7 | 29.7 | 30.4 | 30.4 | 30.9 |
| 112.5 | 30.9 | 30.9 | 31.2 | 31.7 | 31.7 | 32.0 | 32.5 | 32.2 |
| 135.0 | 32.2 | 33.0 | 32.5 | 32.7 | 32.5 | 32.5 | 32.5 | 32.7 |
| 157.5 | 33.5 | 33.5 | 34.0 | 34.0 | 34.0 | 34.7 | 34.7 | 34.7 |
| 180.0 | 34.0 | 33.2 | 31.2 | 31.2 | 29.9 | 28.2 | 28.2 | 28.2 |
| 202.5 | 28.2 | 27.2 | 25.7 | 25.4 | 24.4 | 23.4 | 22.9 | 21.9 |
| 225.0 | 21.9 | 21.9 | 21.9 | 21.4 | 21.4 | 21.4 | 21.4 | 19.9 |
| 247.5 | 19.9 | 19.6 | 19.1 | 18.6 | 18.6 | 18.6 | 18.6 | 18.6 |
| 270.0 | 19.1 | 19.9 | 20.9 | 20.9 | 20.1 | 19.1 | 19.1 | 19.1 |
| 292.5 | 19.1 | 18.6 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 |
| 315.0 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 |
| 337.5 | 18.6 | 18.6 | 18.6 | 19.1 | 19.1 | 19.9 | 20.9 | 21.4 |

Depth: 1035 Tilt: 0 Range: 59.6 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 18.6 | 19.1 | 19.1 | 19.6 | 19.9 | 20.9 | 21.4 | 21.9 |
| 22.5 | 22.4 | 23.4 | 23.4 | 23.4 | 23.4 | 23.4 | 23.9 | 23.9 |
| 45.0 | 23.9 | 23.9 | 23.9 | 23.9 | 23.9 | 23.9 | 24.4 | 24.9 |
| 67.5 | 25.2 | 25.2 | 24.9 | 24.4 | 24.9 | 24.9 | 25.2 | 25.4 |
| 90.0 | 25.7 | 25.7 | 25.9 | 26.4 | 26.9 | 27.4 | 28.2 | 28.2 |
| 112.5 | 28.7 | 28.7 | 29.2 | 28.9 | 28.7 | 28.2 | 28.2 | 28.2 |
| 135.0 | 27.9 | 27.7 | 27.4 | 27.7 | 27.9 | 28.2 | 28.2 | 28.7 |
| 157.5 | 29.2 | 29.2 | 29.9 | 30.2 | 30.4 | 30.4 | 30.2 | 29.7 |
| 180.0 | 28.9 | 27.9 | 27.2 | 26.7 | 26.2 | 25.4 | 24.9 | 23.9 |
| 202.5 | 23.4 | 22.4 | 21.9 | 20.9 | 19.6 | 18.6 | 18.1 | 17.6 |
| 225.0 | 17.1 | 17.1 | 17.1 | 17.1 | 16.1 | 16.1 | 15.8 | 15.3 |
| 247.5 | 14.8 | 14.6 | 14.6 | 14.3 | 14.3 | 13.8 | 13.8 | 13.8 |
| 270.0 | 13.8 | 13.8 | 13.6 | 13.6 | 13.3 | 13.1 | 12.8 | 12.6 |
| 292.5 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.1 | 11.8 | 11.8 |
| 315.0 | 11.8 | 11.8 | 12.1 | 12.3 | 12.6 | 12.8 | 13.1 | 13.1 |
| 337.5 | 13.3 | 13.6 | 13.8 | 15.1 | 16.6 | 16.6 | 17.6 | 18.1 |

Depth: 1035 Tilt: -90 Range: 24.8 VOS: 5990

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 22.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 45.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 67.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 90.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 112.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 135.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 157.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 180.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 202.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 225.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 247.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 270.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 292.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 315.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 337.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |

## FERRELLGAS LPG FACILITY

**Operator:** Ferrellgas Inc.

**Bond Company:** Travelers Casualty and Surety Co. of America

**Bond No.:** 030 S 103626358 BCM

**Amount:** $25.000.00

**Date approved:** 8/01/96

**Permits covered by this bond:**

556 (Cavern 01)
557 (Cavern 02)
562 (Water well)
602 (Cavern 03)
603 (Cavern 04)
✓ 606 (Cavern 05)
607 (Cavern 06)
646 (Cavern 07)
647 (Cavern 08)
648 (Cavern 09)
671 (Cavern 10)
672 (Cavern 11)
776 (Cavern 12 -- not developed)
777 (Expired)
778* (Expired)

* Bond in Permit #778

May 20, 1996

Memo to Ferrellgas files
From: Steve Rauzi SR
Re: Discussion of volume verification in May 17, 1996 Commission meeting

All of the Commissioners present agreed that the sonar method was the best available technology to determine cavity shapes. They agreed that accepting volumetric measurements would be appropriate as long as sonar measurements continued to be used. Dr. Nations noted that sonar determinations could be waived in individual cases in appropriate situations.

State of Arizona
Arizona Geological Survey
416 W. Congress, Suite 100
Tucson, Arizona 85701
(520) 770-3500

Fife Symington
Governor

Larry D. Fellows
Director and State Geologist

May 1, 1996

Memo: Dale Thompson, Ferrellgas, Adamana — 9 pages total
Fax #: 524-2635
From: SR Steve Rauzi, Oil & Gas Administrator
Re: Volume verification surveys pursuant to A.A.C. R12-7-182(D)

I examined the sonar surveys on several of your storage wells after receiving the three sonar surveys run in March 1996. My analysis indicates that sonar surveys do not provide an exact picture of the shape and change of shape from survey to survey. On the other hand, sonar surveys, even when run by different companies and tools, do provide a good picture of the general shape and change in shape of a cavity as shown on the attached Exhibits 3 through 8.

The increase then decrease in sonar-determined volume for cavities 3 and 6 on Exhibit 1 is of special concern to me. I'm not sure if the discrepancy is due to running sonar in open hole versus through-pipe, different companies and tools, differences in tool design or calculation parameters, or improved technology through time. One way to verify sonar-determined volumes would be to complement them with volumetric measurements. The generally consistent cavity shape, change in shape, and rate of maximum radius increase over the last 16 years shown by the sonar survey results on the attached Exhibits 2 through 8 confirms the general integrity of the shape your caverns.

However, in light of the increase then decrease in sonar-determined volume in cavities 3 and 6 shown on Exhibit 1, it would be beneficial and appropriate to complement the sonar-determined volume verifications with volumetric measurements. As a result, I plan to recommend that the Oil and Gas Conservation Commission accept volumetric measurements and sonar surveys run on alternate five year cycles to provide a more accurate tracking and verification of cavity volumes; alternatively, to accept volumetric measurements annually complemented with sonar surveys at least every ten years or whenever a cavity is reentered and worked over, starting a new ten-year cycle.

Please feel free to comment on any aspect my analysis or reasoning. Also, I look forward to receiving your latest volumetric measurements pursuant to our discussion before the Commission's next meeting on May 17.

## ADAMANA SONAR METHOD VOLUME VERIFICATION HISTORY

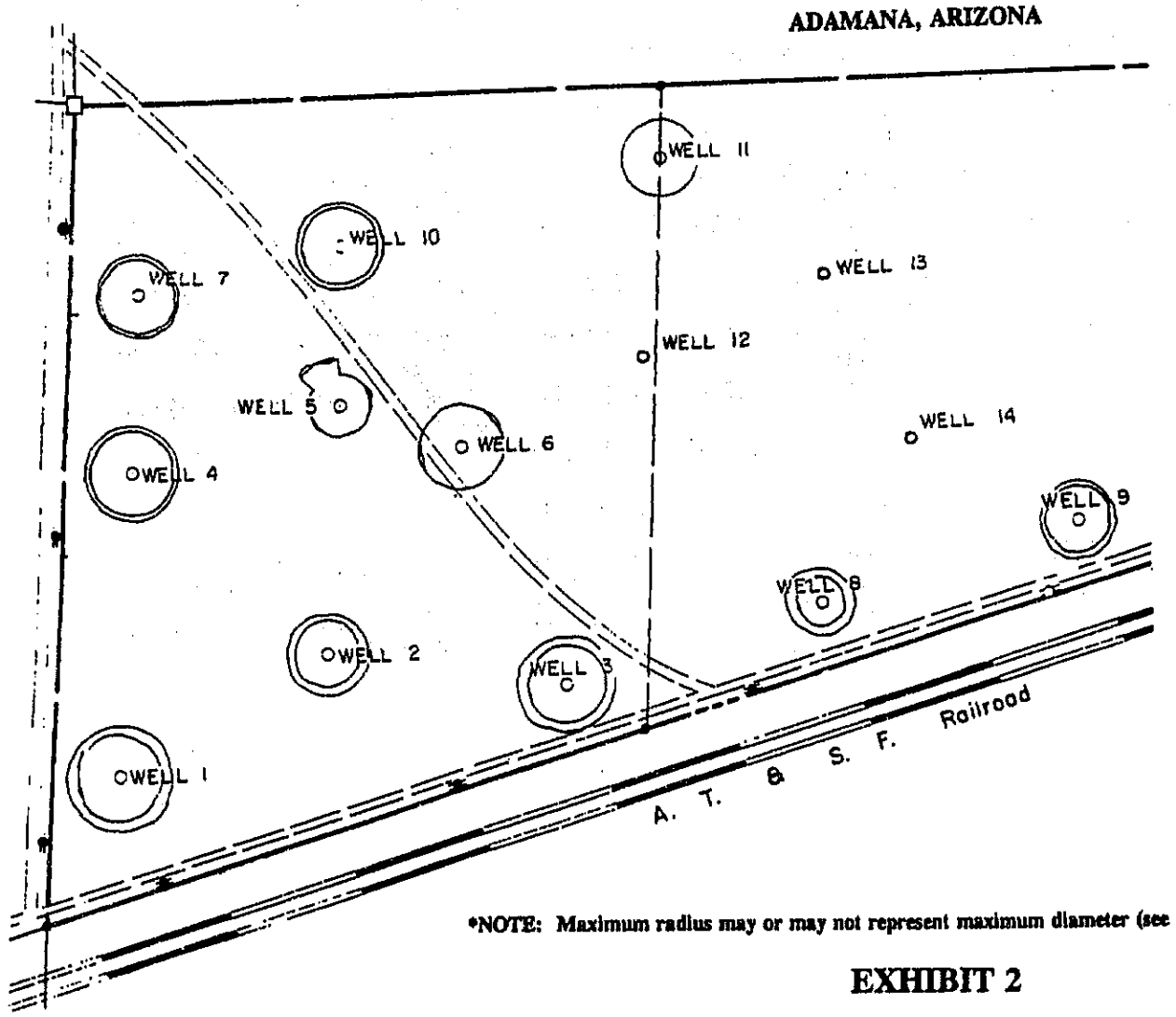
| Permit | Well No. | TD | Cavern | Initial Sonar | Max Radius | Sonar Volume | Second Sonar | Max Radius | Sonar Volume | Third Sonar | Max Radius | Sonar Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 556 | 1 | 1101' | 900-985' | 4/79 Dowell | 99'@942' | 150,532 bbls | 3/92 Digital* | 118'@944' | 176,119 bbls | | | |
| 557 | 2 | 1112' | 906-995' | 4/79 Dowell | 74'@958' | 149,008 bbls | 2/89 MicroGage | 90'@970' | 193,563 bbls | 2/95 Sonarwire** | 89'@938' | 197,559 bbls |
| 602 | 3 | 1140' | 944-1008' | 4/79 Dowell | 87'@995' | 145,550 bbls | 5/91 Digital* | 104'@986' | 195,355 bbls | 3/96 Sonarwire* | 104'@982' | 185,607 bbls |
| 603 | 4 | 1120' | 950-1007' | 4/80 Dowell | 97'@945' | 158,244 bbls | 3/92 Digital | 102'@978' | 189,616 bbls | | | |
| 606 | 5 | 1119' | 938-1035' | --- | | --- | 3/89 MicroGage | 100'@1026' | 165,922 bbls | 3/95 Sonarwire** | 101'@1026' | 169,615 bbls |
| 607 | 6 | 1120' | 924-1027' | 4/80 Dowell | 93'@952' | 146,458 bbls | 5/91 Digital* | 94'@964' | 200,659 bbls | 3/96 Sonarwire* | 90'@1006' | 176,893 bbls |
| 646 | 7 | 1152' | 951-1079' | 4/80 Dowell | 84'@1055' | 171,283 bbls | 5/91 Digital | 90'@1074' | 179,122 bbls | 3/96 Sonarwire** | 90'@1066' | 199,654 bbls |
| 647 | 8 | 1132' | 956-1069' | 4/80 Dowell | 57'@1060' | 110,892 bbls | 3/92 Digital* | 72'@1054' | 140,952 bbls | | | |
| 648 | 9 | 1125' | 973-1065' | 4/80 Dowell | 71'@1030' | 108,222 bbls | 3/92 Digital* | 81'@1015' | 168,797 bbls | | | |
| 671 | 10 | 1150' | 978-1042' | 4/79 Dowell | 85'@988' | 128,541 bbls | 3/89 MicroGage | 99'@990' | 164,567 bbls | 2/95 Sonarwire** | 98'@988' | 168,792 bbls |
| 672 | 11 | 1176' | 960-1101' | --- | | --- | 3/89 MicroGage | 84'@1070' | 227,718 bbls | 3/95 Sonarwire** | 84'@1070' | 244,537 bbls |
| 776 | 12 | 1200' | Cavern not developed | | | | | | | | | |
| TOTAL CAPACITY | | | | | | | | | 2,031,123 bbls<br>85,307,166 gallons | | | |

* Sonar through one string of pipe
** Sonar through two strings of pipe

# EXHIBIT 1

# CAVERN MAXIMUM RADIUS* PLOT, FERRELLGAS LPG-STORAGE FACILITY

## ADAMANA, ARIZONA




**INDICATED RADIUS INCREASE THROUGH TIME BY SONAR MEASUREMENT**

| Well No. | TD | Cavern | Initial Sonar | Max Radius | Latest Sonar | Max Radius | Sonar Volume | Indicated net Increase |
|---|---|---|---|---|---|---|---|---|
| 1 | 1101' | 900-985' | 4/79 | 99'@942' | 3/92 | 118'@944' | 176,119 bbls | 19'/13yr (1.5'/yr) |
| 2 | 1112' | 906-995' | 4/79 | 74'@958' | 2/95 | 89'@938' | 197,559 bbls | 15'/16yr (1'/yr) |
| 3 | 1140' | 944-1008' | 4/79 | 87'@995' | 3/96 | 104'@982' | 185,607 bbls | 17'/17yr (1'/yr) |
| 4 | 1120' | 950-1007' | 4/80 | 97'@945' | 3/92 | 102'@978' | 189,616 bbls | 5'/12yr (.5'/yr) |
| 5 | 1119' | 938-1035' | 3/89 | 100'@1026' | 3/95 | 101'@1026' | 169,615 bbls | 1'/6yr (.2'/yr) |
| 6 | 1120' | 924-1027' | 4/80 | 93'@952' | 3/96 | 94'@1006' | 176,893 bbls | 1'/16yr (.06'/yr) |
| 7 | 1152' | 951-1079' | 4/80 | 84'@1055' | 3/96 | 90'@1066' | 199,654 bbls | 6'/16yr (.4'/yr) |
| 8 | 1132' | 956-1069' | 4/80 | 57'@1060' | 3/92 | 72'@1054' | 140,952 bbls | 39'/12yr (3'/yr) |
| 9 | 1125' | 973-1065' | 4/80 | 71'@1030' | 3/92 | 81'@1015' | 168,797 bbls | 10'/12yr (.8'/yr) |
| 10 | 1150' | 978-1042' | 4/79 | 85'@988' | 2/95 | 98'@988' | 168,792 bbls | 13'/16yr (.8'/yr) |
| 11 | 1176' | 960-1101' | 3/89 | 84'@1070' | 3/95 | 84'@1070' | 244,537 bbls | 0'/6yr (--/yr) |
| 12 | 1200' | Cavern not developed | | | | | | |

*NOTE: Maximum radius may or may not represent maximum diameter (see Well 5 above & Exhibits 3-5)

**EXHIBIT 2**

SLR APR '96

SCALE : 1" = 50'

# MAXIMUM RADIUS PLOT

# FERRELLGAS WELL 5

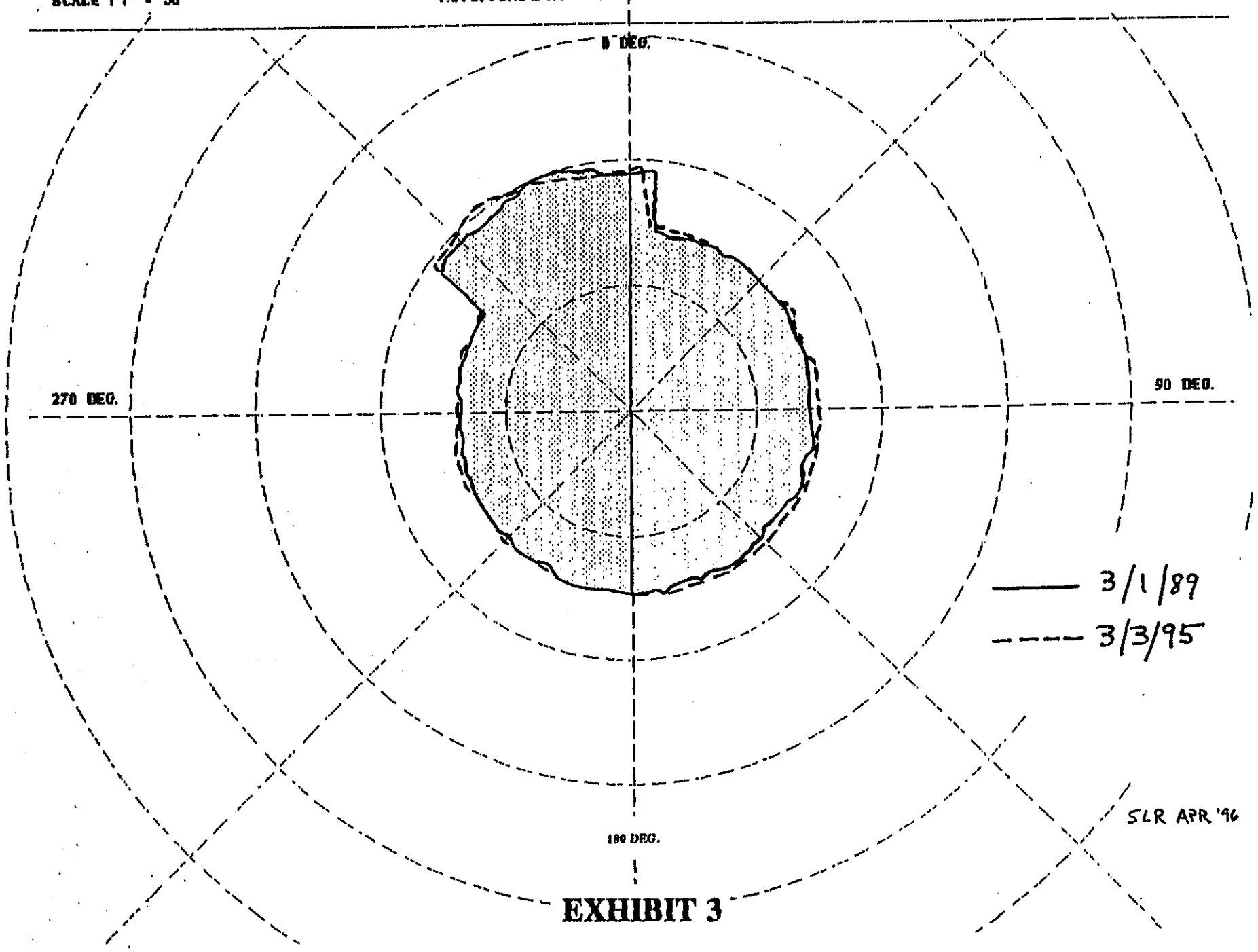



**EXHIBIT 3**

VERTICAL CROSSECTION

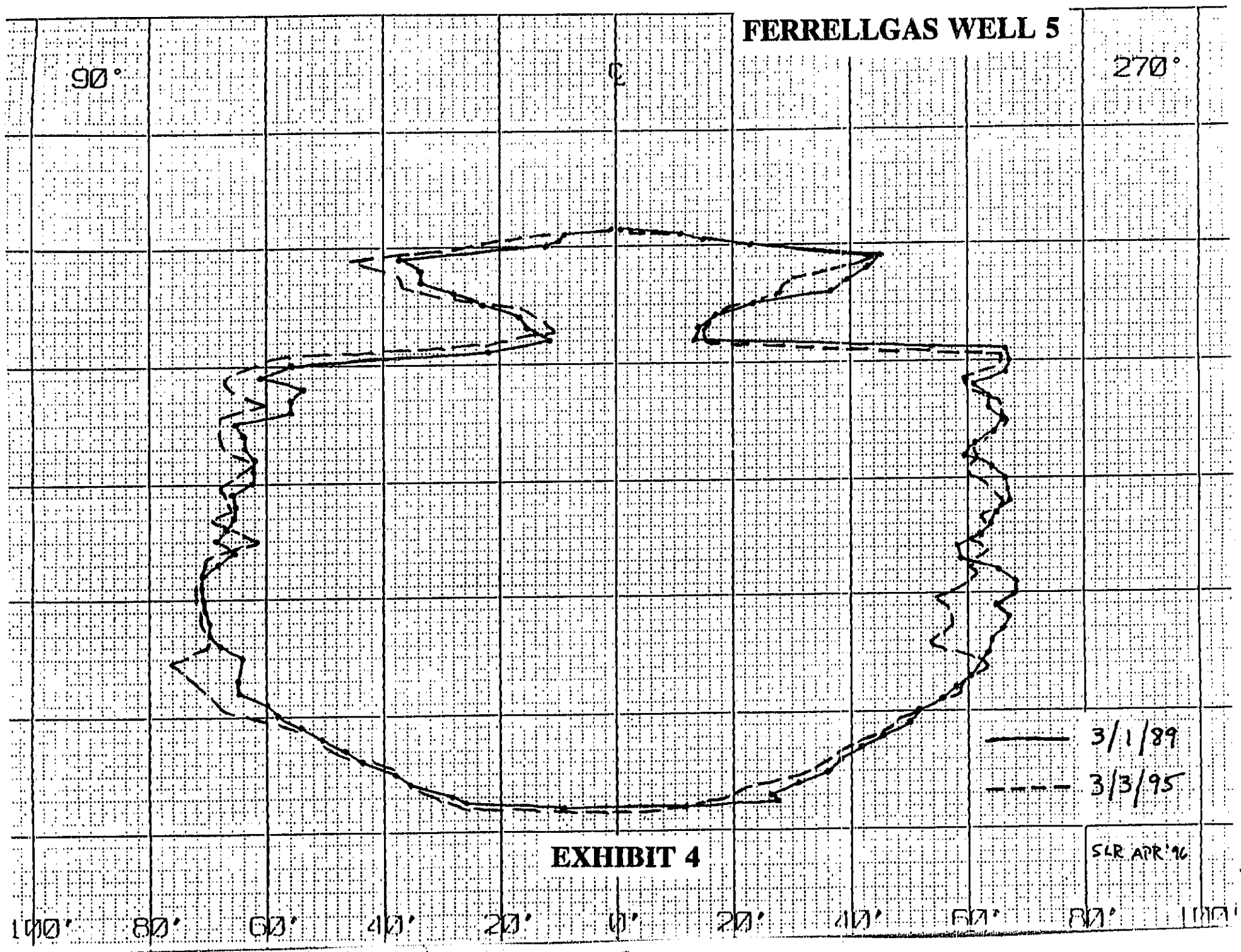



EXHIBIT 4

VERTICAL CROSSECTION

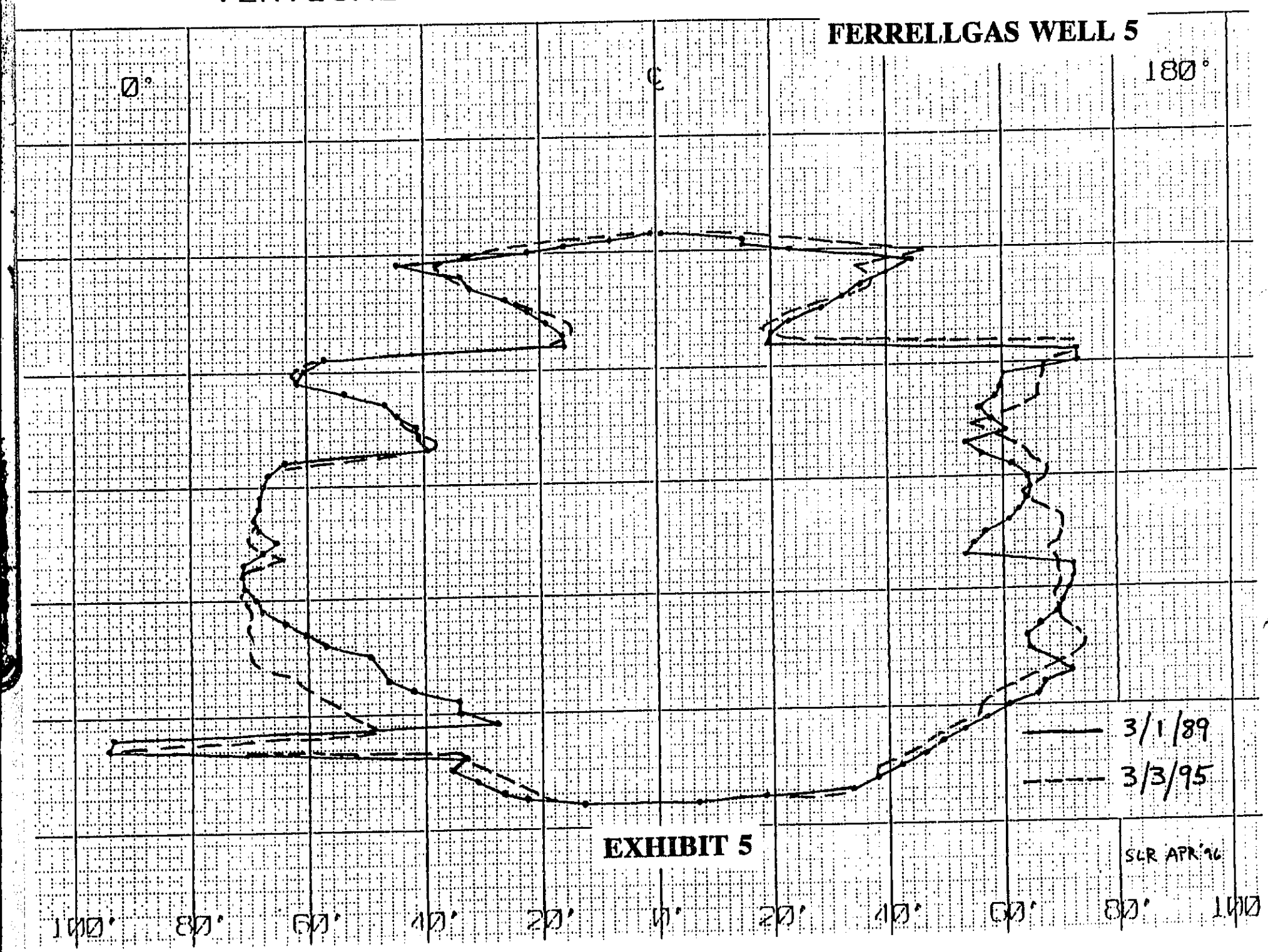



EXHIBIT 5

SCALE : 1" = 50'

# MAXIMUM RADIUS PLOT

## FERRELLGAS WELL 6

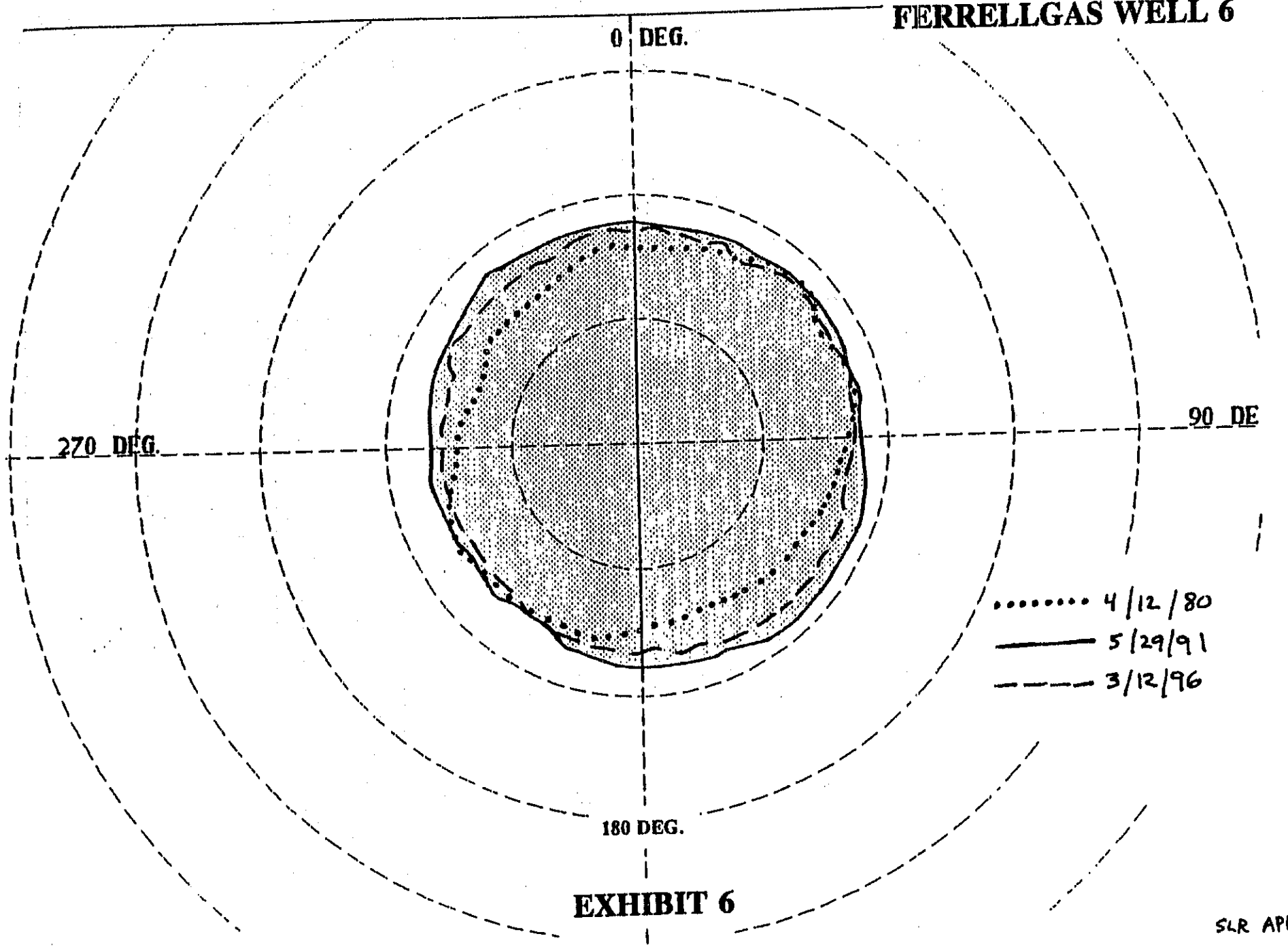



**EXHIBIT 6**

SLR APR'96

**FERRELLGAS WELL 6**

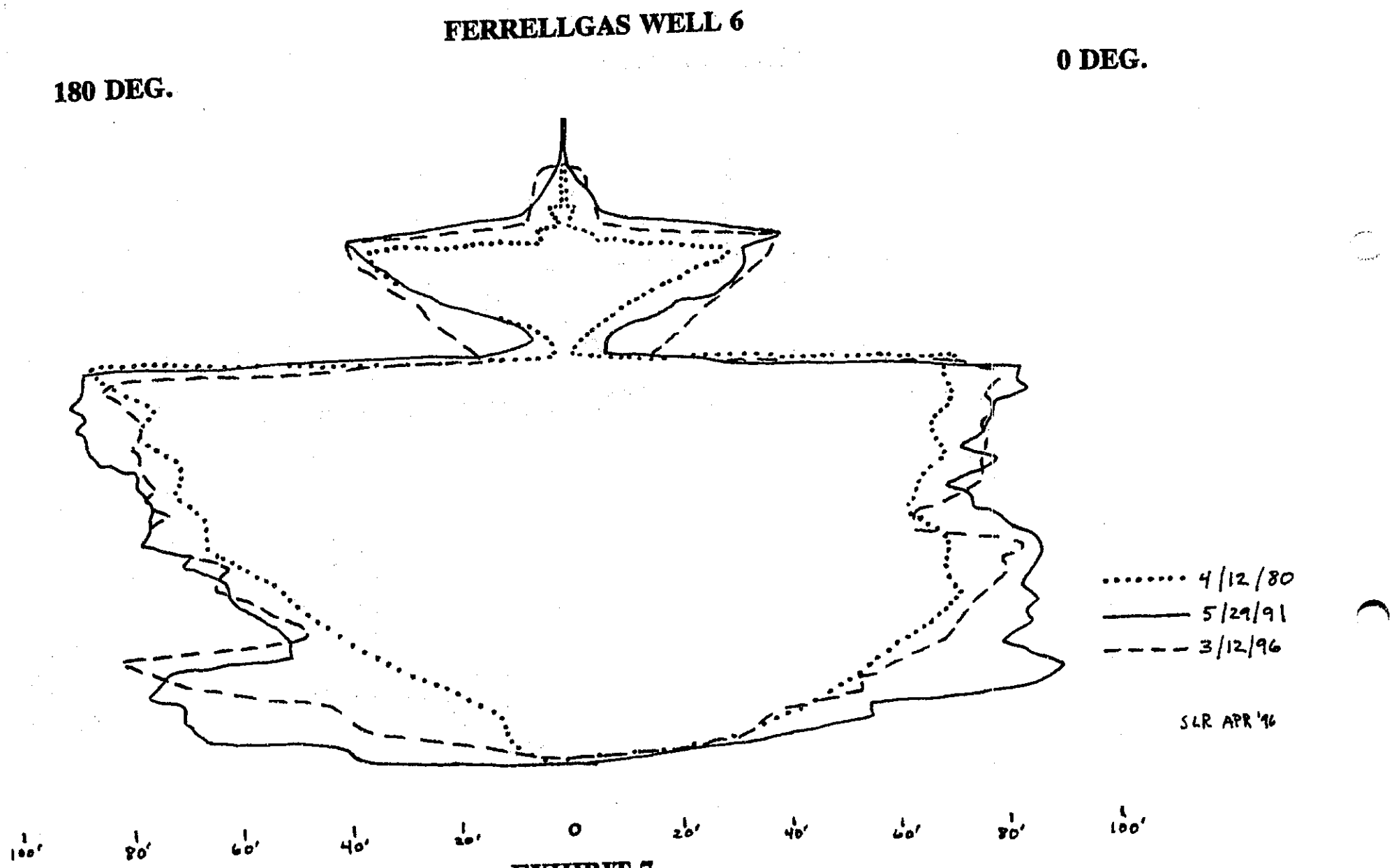



**EXHIBIT 7**

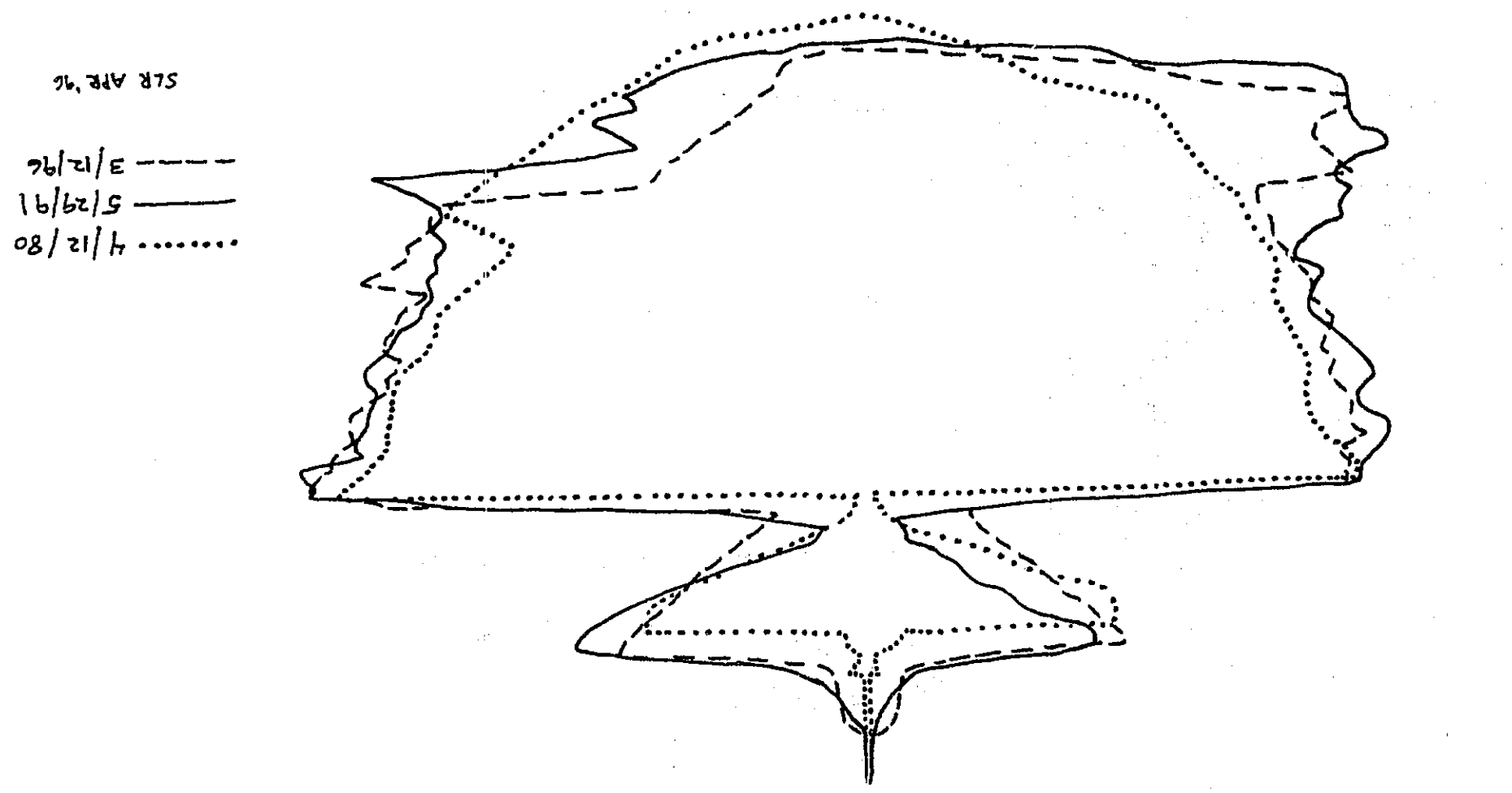

FERRELLGAS WELL 6
90 DEG.
270 DEG.
4/12/80
5/29/91
3/12/96
SLR APR.'96
100'
80'
60'
40'
20'
0
20'
40'
60'
80'
100'

EXHIBIT 8

Ferrellgas

April 24, 1996

To: Steve Rauzi
Arizona Geological Survey

From: Dale Thompson
Ferrell North America

Subject: Cavern Capacities

Steve, as of October 30, 1996 these are the last known capacities on all the Caverns at the Adamana Storage Facility. (Capacities are in gallons).

| | |
|---|---|
| Cavern #1 | 8,496,730 |
| Cavern #2 | 6,900,978 |
| Cavern #3 | 7,368,738 |
| Cavern #4 | 8,676,071 |
| Cavern #5 | 6,884,626 |
| Cavern #6 | 7,886,657 |
| Cavern #7 | 8,068,158 |
| Cavern #8 | 6,349,044 |
| Cavern #9 | 6,969,816 |
| Cavern #10 | 7,792,578 |
| Cavern #11 | 10,601,992 |

606

If we can be of further assistance please contact us at (520) 524-3229.

Sincerely,

Dale Thompson

Adamana Road • P.O. Box 1624 • Holbrook, Arizona 86025 • 602-524-3229

Ferrellgas

April 9, 1996

Steve L. Rauzi, Administrator
Oil and Gas Program
5150 N. 16th St., Ste. B141
Phoenix, Arizona 85016

file 606

APR 1996
ARIZONA GEOLOGICAL SURVEY

Dear Steve,

After our discussion on March 11, 1996 about "volumetric measurement" of our storage caverns I did some research.

Our past records on last known capacities indicate a more exact method of yearly cavern measurement. Due to the fact that almost all of our caverns are filled and emptied on a yearly basis, I feel this would be more accurate and more often a "yearly" measurement program.

Considering the reasons stated above, I would like to request the Adamana Facility perform the volumetric measurement program on a yearly basis and sonar measurement method every "ten years".

Steve, as you can see by our past sonar reports any increase in size has been very minute over the years. With the acceptance of the commission, my plan would be to sonar any cavern that had to be worked over; otherwise, all caverns would receive the sonar method on a "ten year" basis. All "volumetric measurement" information on our Adamana caverns can be submitted to your office on a yearly or five and/or ten year basis whichever you and the commission would prefer.

Steve, please let me know what you think and how to resolve this matter. Thank you for your time and consideration.

Sincerely,

Dale Thompson
Terminal Manager

Adamana Road • P.O. Box 1024 • Holbrook, Arizona 86025 • 602-524-3229

State of Arizona
# Arizona Geological Survey
845 North Park Avenue, #100
Tucson, Arizona 85719
(602) 882-4795

Fife Symington
Governor

Larry D. Fellows
Director and State Geologist

July 13, 1993

Ms. Brenda Davis, Mail Drop 5
Ferrellgas
One Liberty Plaza
Liberty, Missouri 64068

Re: Ferrellgas wells in Arizona
Approval of blanket bond #U1665522, United Pacific Insurance Company
Release of blanket bond #400 GV 7009, St. Paul Fire and Marine Insurance Company

Dear Ms. Davis:

I have enclosed an approved copy of the referenced blanket bond #U1665522 effective July 16, 1993, for all wells operated by Ferrellgas in Arizona.

This letter represents the Oil and Gas Conservation Commission's approval to release the referenced blanket bond #400 GV 7009 effective July 16, 1993.

Sincerely,

Steven L. Rauzi

Steven L. Rauzi
Oil & Gas Program Administrator

Enclosure

c Ms. Mary T. Flanigan, St. Paul Seaboard, Overland Park, Kansas

State of Arizona
# Arizona Geological Survey
845 North Park Avenue, #100
Tucson, Arizona 85719
(602) 882-4795

Fife Symington
Governor

Larry D. Fellows
Director and State Geologist

June 29, 1993

6006

Ms. Kathy Cordera
Martin Insurance
P. O. Box 8418
Prairie Village, Kansas 66208-0418

FAX 913-676-9145 one copy of bond form No 2 6/29 @ 7:20 am SLR

Dear Ms. Cordera:

In response to your telephone call this morning, I have enclosed two blank copies of the Oil and Gas Conservation Commission's Performance Bond. File two copies of the completed bond form to my attention at the letterhead address.

Our records show that Ferrellgas currently has twelve storage wells and one freshwater well under bond.

Let me know if I can be of further assistance.

Sincerely,

Steven L. Rauzi

Steven L. Rauzi
Oil & Gas Program Administrator

Enclosures

State of Arizona
Arizona Geological Survey
845 North Park Avenue, #100
Tucson, Arizona 85719
(602) 882-4795

Fife Symington
Governor

Larry D. Fellows
Director and State Geologist

May 20, 1993

606

Ms. Mary T. Flanigan
Attorney-in-Fact
St. Paul Seaboard
P. O. Box 935
Overland Park, Kansas 66201-0935

Re: Ferrellgas, Inc. blanket performance Bond No. 400 GV 7009

Dear Ms. Flanigan:

I received your certified letter No. P 105-228-862 requesting the St. Paul Fire and Marine Insurance Company's release from obligation under the captioned bond because the captioned bond is being replaced by United Pacific Insurance Company Bond #U1665502 effective June 25, 1993.

A.A.C. R12-7-103 requires a performance bond to remain in effect until (1) the wells under the bond have been plugged and abandoned as approved by the Oil and Gas Conservation Commission, or (2) the a new blanket bond is posted for the wells. I have not received or approved a replacement bond for the captioned bond.

As a result, I cannot release St. Paul Fire and Marine Insurance Company's obligation under the captioned bond until the United Pacific Insurance Company Bond #U1665502 is received by this office and approved.

Please let me know if I can be of further assistance in this matter.

Sincerely,

Steven L. Rauzi

Steven L. Rauzi
Oil & Gas Program Administrator

c Mr. Greg Greer, Ferrellgas, P.O. Box 4644, Houston, Texas 77216
Mr. Dale Thompson, Ferrellgas, P.O. Box 1024, Holbrook, Arizona 86025

ADAMANA VOLUME VERIFICATION SURVEYS
(all by the sonar method)

| Permit | Well | Survey Date | Survey Date | Current Status |
|---|---|---|---|---|
| 556 | 1 | 4/79 | 3/92 | In compliance |
| 557 | 2 | 4/79 | 2/89 | In compliance |
| 602 | 3 | 4/79 | 5/91 | In compliance |
| 603 | 4 | 4/80 | 3/92 | In compliance |
| 606 | 5 | --- | 3/89 | In compliance |
| 607 | 6 | 4/80 | 5/91 | In compliance |
| 646 | 7 | 4/80 | 5/91 | In compliance |
| 647 | 8 | 4/80 | 3/92 | In compliance |
| 648 | 9 | 4/80 | 3/92 | In compliance |
| 671 | 10 | 4/79 | 3/89 | In compliance |
| 672 | 11 | --- | 3/89 | In compliance |
| 776 | 12 | | | CAVERN NOT DEVELOPED |

606

**Oil and Gas Conservation Commission**
STATE OF ARIZONA
3110 N. 19th AVENUE, SUITE 190
PHOENIX, ARIZONA 85015
PHONE: (602) 255-5161

January 11, 1989

Mr. Glenn Mace
Ferrellgas
Granada Building, Suite 216
3316 East 32nd Street
Tulsa, OK 74135

Dear Mr. Mace:

As we discussed during your visit yesterday, Oil and Gas Conservation Commission Rule 12-7-181.1.i requires that "...a flare or other safety system shall be installed at or near each brine pit..." As you know, the Ferrellgas facility at Adamana does not have a flare installed at present since the dismantling of the rusted-out older system.

Thus it appears that your operation is not in compliance with this rule. Therefore, it is necessary for Ferrellgas to install such a device to come into compliance. Failure to comply would cause the Commission to invoke R12-7-181.1.i which involves shutting down the operation.

You indicated that it will take some time to design, fabricate, and install the flare system. We would hope that this can be completed before the next scheduled inspection of the facility which will be around the end of May 1989.

Although we did not specifically discuss this issue, Rule 12-7-181.1.i.v requires verification of the capacity of each storage cavern every five years. This has not been accomplished since 1979 and 1980. Thus your operation is not in compliance with this rule. It will be necessary for Ferrellgas to begin to verify these capacities very soon. I realize this is the busy season, but as soon as activity declines and caverns are shut in for a few days, the logs can be run.

I was thinking about the possible problem with liquid propane in extremely cold weather. One way to solve the problem is to include an oil-water separator in the flow line from the caverns to the pits. A simple "drip" system might work, or an actual oil-water separator such as is used at gas-condensate wells. We sure don't want to burn up any pit liners.

We will expect to hear from you regularly concerning your progress in the matter of the flare and the sonar.

Very truly yours,

Daniel J. Brennan
Executive Director

WILLIAMS ENERGY COMPANY
9 EAST FOURTH STREET
P. O. BOX 3478
TULSA, OKLAHOMA 74101
PHONE: (918) 583-1711

January 2, 1975

DJD:1:75

Mr. W. E. Allen
Director, Enforcement Section
Oil and Gas Conservation Commission
State of Arizona
4515 North 7th Avenue
Phoenix, Arizona 85013

Dear Bill:

Attached are prints reflecting the well development history for the Adamana underground storage. Please note that wells #1 and #2 had no additional washing since last year report, as 1974 washing activity was concentrated on the smaller new caverns. We have placed LPG in all six wells to meet the 1974/1975 winter demand.

Upon depletion of LPG from wells three through six, it is our intent to initiate washing until resumption of storage in 1975. Should the season not allow time to develop these wells to optimum size, some washing may continue in 1976.

I wish to thank you for your assistance while I was stationed in Arizona, and I look forward to working with you through my new position in Tulsa.

Very truly yours,

WILLIAMS ENERGY COMPANY

Dan J. Dougherty

Dan J. Dougherty
Operations Department

DJD:ak

RECEIVED
JAN 1975
O & G CONS. COMM.

June 2, 1978

Mr. Bob Larsen
Williams Energy Company
P.O. Box 3478
Mail Drop #33-1
Tulsa, Oklahoma 74101

Dear Mr. Larsen:

During a visit yesterday to your LPG storage area at Adamana, Mr. Sam Snyder informed me that you have replaced Dan Dougherty as Manager of Storage Terminals.

The purpose of my visit to this terminal was to discuss our Rule 706. This rule was recently adopted by the Arizona Oil and Gas Conservation Commission at a public hearing. Mr. Dougherty attended this hearing.

Rule 706, as adopted, doesn't affect your storage terminal as it now exists, except Sections C and D. These sections primarily pertain to safety features. The safety feature of immediate concern to this commission is the installation of a flare system.

This Commission does not intend to dictate or even recommend a particular design for this system. We do retain the right to approve the system that you select. The system that Mr. Snyder has discussed with you is not acceptable to the Commission.

We are enclosing a copy of Rule 706, together with a copy of the general rules and regulations of the Commission. You will note that some of these general rules also pertain to your operation.

This Commission has enjoyed a very pleasant working relationship with Williams Energy and be assured that we want to cooperate with you and your staff to the fullest extent.

Your prompt attention to the installation of the flare system will be much appreciated.

Let us know if we can be of any help whatsoever.

Very truly yours,

W. E. Allen
Director
Enforcement Section

WEA/vb

Enc.

March 28, 1978

Mr. Dan J. Dougherty
Manager of Storage Terminal
Williams Energy Company
P.O. Box 3478
Tulsa, Oklahoma 74101

Dear Dan:

Recent developments connected with the underground storage of LPG in Arizona have caused this Commission to make a study of various safety devices which would tend to prevent any accidents from occurring during the pumping of LPG into a storage reservoir. It has been concluded that a flare system, properly installed and operated in a proper manner, would be the safest and most economical of all safety systems.

These conclusions make it necessary that this Commission request all operators of LPG storage projects within the State to install a flare system at their respective storage sites as quickly as possible. The Commission does not intend to dictate to the operator the technical design of this system, but does retain the right to approve the system selected.

Your full and early cooperation in the installation of such a safety system is expected.

Very truly yours,

W. E. Allen
Director
Enforcement Section

WEA/vb

Williams Energy has completed their 9th well for LPG storage at Adamana. Williams Energy had a bad primary cement job on their No. 8 well. I plan to check on the repair of this cementing job tomorrow and then go on to the Dineh-Bi-Keyah and check Kerr-McGee's progress on their waterflood installations.

606

Williams Energy has completed the drilling of 2 additional storage wells in the Adamana area and they have one permit outstanding.

RECEIVED
SEP 10 1975
O & G CONS. COMM.

OFFICE OF
**Oil and Gas Conservation Commission**
STATE OF ARIZONA
4515 NORTH 7TH AVE.
PHOENIX, ARIZONA 85013
PHONE: (602) 271-5161

January 20, 1975

Mr. R. J. Wiruth
Manager of Operations
Williams Energy Company
P. O. Box 3478
Tulsa, Oklahoma 74101

Re: Adamana Storage Project

You are aware that this office occasionally inspects all field operations including storage projects. We find your project at Adamana to be in first class condition and your supervisor, Mr. Sam Snyder is always most cooperative. It is indeed a pleasure to work with people like Sam.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rlb

WILLIAMS ENERGY COMPANY
9 East Fourth Street
P. O. Box 3478
Tulsa, Oklahoma 74101
Phone: (918) 583-1711

January 2, 1974

RJW:3:74

Mr. W. E. Allen
Director, Enforcement Section
Oil and Gas Conservation Commission
State of Arizona
4515 North Seventh Avenue
Phoenix, Arizona 85013

Dear Bill:

Attached are copies of drawings showing the well development history for Adamana Underground Storage installation. You will note that we have placed propane in all wells, except number three, and this well continued to wash during the fall and winter of 1973. It is our intention that upon depletion of propane from wells four thru six, we will again initiate washing. It is our intent to take all six wells to 150,000 barrels.

In reviewing our schedule, it appears that obtaining this goal in all wells prior to the resumption of storage in 1974 is optimistic. Therefore, some washing may continue in 1975.

I also wish to advise you that Williams Energy Company has contracted with Fenix & Scisson of Tulsa, Oklahoma to conduct sonar surveys on some of the wells at Adamana. This engineering work will commence during the month of March, and will provide some structural information that we feel is necessary. Should you desire to observe any of this work, please feel free to stop by. Also, if we find any information that we feel may be of interest to you, I will pass the same on.

Thank you for your assistance, and I look forward to working with you in 1974.

DRAWINGS OF WELLS USED FOR UNDERGROUND STORAGE ARE FILED IN NO. 607A.

Very truly yours,

WILLIAMS ENERGY COMPANY

R. J. Wiruth
Manager of Operations

RJW:dh

Enclosures

RECEIVED
JAN - 1974
O & G CONS. COMM.

#606

DOXOL

Uregas

OFFICE OF
**Oil and Gas Conservation Commission**
STATE OF ARIZONA
4515 NORTH 7TH AVE.
PHOENIX, ARIZONA 85013
PHONE: (602) 271-5161

April 16, 1973

Mr. D. J. Doughtery
Williams Energy Company
P. O. Box 35
Holbrook, Arizona 86025

RE: LPG STORAGE PROJECT

Dear Mr. Doughtery:

On a recent visit to your storage project at Adamana, it was noticed that at times brine was allowed to flow directly from the well to the ground. This brine or salt water then collected in a low spot just north of your fence line and also just north of the railroad right of way. This is in violation of Rule 306 and 307 of the Rules and Regulations of the Oil and Gas Conservation Commission. This situation has been called to the attention of both Mr. Greer and Mr. Sam Snyder.

If at times it is necessary to purge your wells in this manner, the brine or salt water must be contained in a suitable vessel or pit that has been prepared in such a manner that it is impervious to seepage.

Please instruct your employees to stop the practice of allowing the brines or salt water to escape to the ground.

Should you have any questions regarding this matter, please feel free to contact this office.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rlb

Enclosure

606

WILLIAMS ENERGY COMPANY
9 EAST FOURTH STREET
P. O. BOX 3478
TULSA, OKLAHOMA 74101
PHONE: (918) 583-1711

March 27, 1973

RJW:232:73

Mr. W. E. Allen
Director, Enforcement Section
Oil & Gas Conservation Commission
4515 North 7th Avenue
Phoenix, Arizona 85013

Dear Mr. Allen:

Enclosed you will find the completion reports and compensated neutron logs for wells number 3, 4, 5, and 6. I trust that this will complete the reporting requirements for these wells until our washing report is due.

Our schedule calls for us to store propane in three of these wells starting in August, even though they will not be completed. They will be empty sometime in December, and washing will resume with completion forecasted in May 1974.

Yours very truly,

WILLIAMS ENERGY COMPANY

R. J. Wiruth

R. J. Wiruth
Manager of Operations

RJW:dh

Enclosures

RECEIVED
MAR 29 1973
O & G CONS. COMM.

OFFICE OF
**Oil and Gas Conservation Commission**
STATE OF ARIZONA
4515 NORTH 7TH AVE.
PHOENIX, ARIZONA 85013
PHONE: (602) 271-5161

March 5, 1973

Mr. Robert Wiruth
Williams Energy Company
P. O. Box 3478
Tulsa, Oklahoma 74101

Re: Williams Energy Well Nos. 3, 4, 5, & 6
NW/NW Sec 8-T18N-R24E
Apache County
Permit Nos. 602, 603, 606 & 607

Dear Mr. Wiruth:

Since the samples for the above referenced wells have been delivered to Four Corners Sample Cut in Farmington, New Mexico, we are assuming that these wells have been completed in so far as the drilling and casing of the wells are concerned. Please refer to Rules 107, 108 & 109, of the Rules and Regulations of the Arizona Oil and Gas Conservation Commission and submit the necessary reports: Form 25, on the cementing of the casing strings in these holes and Form 4, Completion Report.

At the time you have completed enlarging the reservoir for LPG Storage, we will need to be advised of the approximate capacity and shapes of the storage areas.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rlb

February 2, 1973

Mr. Frank Getscher
P. O. Box 98
Scottsdale, Arizona 85252

Dear Mr. Getscher:

The following permits were issued since January 15, 1973.

Williams Energy Company Well No. 5 & 6
NW/NW Sec 8-T18N-R24E-
Apache County
Permit Nos. 606 & 607

The above are LPG Storage Wells.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEArlb

February 2, 1973

Mrs. Jo Ratcliff
Four Corners Sample Cut Association
P. O. Box 899
Farmington, New Mexico 87401

Dear Mrs. Ratcliff:

The following permits were issued since January 15, 1973.

Williams Energy Company Well No. 5 & 6
NW/NW Sec 8-T18N-R24E
Apache County
Permit Nos. 606 & 607

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rlb

February 2, 1973

Mr. Robert Wiruth
Williams Energy Company
P. O. Box 3478
Tulsa, Oklahoma 74101

Re: Williams Energy Company Well No. 5 & 6
NW/NW Sec 8-T18N-R24E
Apache County
Permit Nos. 606 & 607

Dear Mr. Wiruth:

Enclosed please find Reeeipt Nos. 2944 and 2945 covering the $25 filigg fee, a copy of your approved Applications for Permit to Drill and Permit to Drill Nos. 606 and 607.

Also enclosed are miscellaneous instruction sheets concerning samples and other Commission requirements.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rlb

Encs.

WILLIAMS ENERGY COMPANY
9 EAST FOURTH STREET
P. O. BOX 3478
TULSA, OKLAHOMA 74101
PHONE: (918) 583-1711

January 24, 1973

RJW:50:73

Mr. W. E. Allen
Director, Enforcement Section
Oil & Gas Conservation Commission
4515 North 7th Avenue
Phoenix, Arizona 85013

Dear Mr. Allen:

I regret that I missed you when I called on January 17, 1973 to obtain verbal permission to locate our rig on Well Number 5. I discussed the problem with Mr. Bannister and he granted permission.

Enclosed are the applications to drill Wells Number 5 and 6 on our property along with the $25 filing fee. Also attached is a plant showing the location of these holes.

Very truly yours,

WILLIAMS ENERGY COMPANY

R. J. Wiruth
Manager of Operations

RJW:sw

Enclosures

RECEIVED
FEB 5 1973
O & G CONS. COMM.

DOXOL 606

ONE OF THE WILLIAMS COMPANIES

Uregas

Susan Wathenson

**WILLIAMS ENERGY COMPANY** No.57934

Uregas

DOXOL

Batch 23

permit 606

| VOUCHER | | INVOICE | | | INVOICE AMOUNT | DISCOUNT AMOUNT | NET AMOUNT |
|---|---|---|---|---|---|---|---|
| MO. | NUMBER | MO. | DAY | NUMBER | | | |
| | | 01 | 24 | 6103 | | | 25 00 |

REMITTANCE STATEMENT - PLEASE DETACH CHECK BEFORE DEPOSITING