P20

[redacted]

Ferrellgas, Inc. (Buckeye Gas Prod.)
NW/NW Sec 8-T18N-R24E, Apache Cty 672

COUNTY Apache AREA Adamana LEASE NO. Fee

WELL NAME Buckeye Geo Products ~~Williams Energy~~ Co., Storage Well No. 11 Fee

LOCATION NW/NW SEC 8 TWP 18N RANGE 24E FOOTAGE 1321.68' FWL & 150' FNL

ELEV 5325.20 GR 5369 KB SPUD DATE 10-14-76 STATUS COMP. DATE 10-25-76 TOTAL DEPTH 1176

CONTRACTOR Signal Oilfield Services, Inc.

| CASING SIZE | DEPTH | CEMENT | LINER SIZE & DEPTH |
|---|---|---|---|
| 13 3/8" | 167 | 150 | |
| 9 5/8" | 912 | 410 | |
| 7" | 955 | – | Hung |
| 4 1/2" | 1168 | – | Hung |

DRILLED BY ROTARY ✓
DRILLED BY CABLE TOOL
PRODUCTIVE RESERVOIR
INITIAL PRODUCTION NA

| Formation | Top | Bottom | Description* |
|---|---|---|---|
| Surface | 0 | 41 | Soil |
| | 41 | 67 | Red clay |
| | 67 | 160 | Clay & shells |
| | 160 | 386 | Shale with sand stringers |
| Coconino | 386 | 806 | Sand |
| | 806 | 840 | Shaley sand |
| | 840 | 866 | Sandy shale |
| | 866 | 877 | Shaley anhydrite |
| | 877 | 890 | Anhydrite |
| | 890 | 900 | Shale |
| | 900 | 904 | Anhydrite |
| | 904 | 906 | Shale |
| Top Salt | 906 | 1172 | Salt with shale stringers |
| | 1172 | 1176 | Shale |
| TD | | 1176 | |

Sonic-GR

SAMPLE LOG NO
SAMPLE DESCRP. NO
SAMPLE NO. NO
CORE ANALYSIS NO
DSTs None

REMARKS Samples Not Required

APP. TO PLUG
PLUGGING REP.
COMP. REPORT ✓

WATER WELL ACCEPTED BY

BOND CO. ~~The Ætna Casualty & Surety~~ ~~Federal Insurance Co.~~ St. Paul Fire & Marine Ins. Co. Credit P/N 778 BOND NO. ~~8047-02-65~~ S40-32083 DATE 1-15-80

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

FILING RECEIPT 715 LOC. PLAT X WELL BOOK X PLAT BOOK X

API NO. 02-001020224 DATE ISSUED 10-22-1976 DEDICATION NA

PERMIT NUMBER 672

(over)

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: C11 / Field & Reservoir: ADAMANA, AZ. |
| Location: 150.00 FSL - 1329.00 FWL | County: APACHE |
| Sec. TWP-Range or Block & Survey: SEC. 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 |
|---|---|---|---|---|
| 10-14-76 | 10-19-76 | 10-25-76 | 5357 feet | 5362 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. |
|---|---|---|---|
| 1176 | - | SALT SOLUTION | |

| Producing interval (s) for this completion | Rotary tools used (interval) | Cable tools used (interval) |
|---|---|---|
| 912 TO 1168 | 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): COMPENSATED SONIC LOG WITH GAMMA RAY CALIPER, 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. | 167 | 225 | 0 |
| PROTECTION | 12¼ | 9 5/8 | 32.3 | 912 | 412 | 0 |
| INTERMEDIATE | 12¼ | 7 | 20 | 1003 | HUNG-UNCEMENTED | |
| SOLUTION | 12¼ | 4½ | 10.79 | 1168 | HUNG-UNCEMENTED | |

**TUBING RECORD**

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

**LINER RECORD**

| Size | Top | Bottom | Sacks cement | Screen (ft) |
|---|---|---|---|---|
| in. | ft. | 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 | Gas prod. during test | Water prod. during test | Oil gravity |
|---|---|---|---|---|---|---|
| | | | bbls. | MCF | bbls. | °API (Corr) |

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

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.

Date: 6-28-82 Signature: [signature]

Permit No. 672

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 | 56 | RED CLAY |
| | 56 | 137 | CLAY AND SAND SHELLS |
| | 137 | 181 | SAND SHELLS AND CLAY |
| | 181 | 195 | SAND |
| | 195 | 224 | SANDY SHALE |
| | 224 | 279 | SHALEY SAND |
| | 279 | 345 | SAND SHALE |
| COCONINO | 345 | 794 | COCONINO |
| | 794 | 801 | SHALE |
| | 801 | 814 | ANHYDRITE |
| | 814 | 827 | SHALE |
| | 827 | 855 | ANHYDRITE |
| | 855 | 870 | SHALE |
| | 870 | 891 | ANHYDRITE |
| | 891 | 899 | SAND |
| | 899 | 988 | SHALE |
| | 988 | 1111 | POTASH |
| | 1111 | 1123 | SANDY SHALE |
| | 1123 | 1142 | SALT |
| | 1142 | 1176 | 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 report 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

# 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: Williams Energy Company | Address: P. O. Box 3478 Tulsa OK 74101 |
| Federal, State or Indian Lease Number or name of lessor if fee lease: Williams Energy Company | Well Number: 11 / Field & Reservoir: Adamana |
| Location: 1321.68 FWL & 150.0 FNL | County: Apache |
| Sec. TWP-Range or Block & Survey: Section 8, T 18N, R 24E | |

| Date spudded | Date total depth reached | Date completed, ready to produce | Elevation (DF, RKB, RT or Gr.) feet | Elevation of casing hd. flange feet |
|---|---|---|---|---|
| 10-14-76 | 10-19-76 | 10-25-76 | 5357 | KB 5369' |

| 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. |
|---|---|---|---|
| 1176' | | LPG Storage | |

| Producing interval (s) for this completion | Rotary tools used (interval) | Cable tools used (interval) |
|---|---|---|
| | 0 - 1176' | No |

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

| Type of electrical or other logs run (check logs filed with the commission) | Date filed |
|---|---|
| Sonic-Gamma Ray | |

## 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" | 48.0 | 167' | 150 | 0 |
| Protection | 12¼" | 9-5/8" | 32.3 | 912' | 410 | 0 |
| Solution | | 7" | 20.0 | 955' | Hung | 0 |
| Solution | | 4½" | 11.6 | 1168' | Hung | 0 |

**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 Manager of Storage Terminals 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.

December 7, 1976
Date

Dan J Dougherty
Signature Dan J. Dougherty

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O & G CONS. COMM.

Permit No. 672

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 | 41 | Soil |
| | 41 | 67 | Red clay |
| | 67 | 160 | Clay & shells |
| | 160 | 386 | Shale with sand stringers |
| Coconino | 386 | 806 | Sand |
| | 806 | 840 | Shaley sand |
| | 840 | 866 | Sandy shale |
| | 866 | 877 | Shaley anhydrite |
| | 877 | 890 | Anhydrite |
| | 890 | 900 | Shale |
| | 900 | 904 | Anhydrite |
| | 904 | 906 | Shale |
| Top Salt | 906 | 1172 | Salt with shale stringers |
| | 1172 | 1176 | Shale |
| TD | | 1176 | |

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DEC 10 1976
O & G CONS. COMM.

672

* 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 report 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

## DETAIL OF FORMATIONS PENETRATED

| Formation | Top | Bottom | Description* |
|---|---|---|---|
| Surface | 0 | 41 | Soil |
| | 41 | 67 | Red clay |
| | 67 | 160 | Clay & shells |
| | 160 | 386 | Shale with sand stringers |
| Coconino | 386 | 806 | Sand |
| | 806 | 840 | Shaley sand |
| | 840 | 866 | Sandy shale |
| | 866 | 877 | Shaley anhydrite |
| | 877 | 890 | Anhydrite |
| | 890 | 900 | Shale |
| | 900 | 904 | Anhydrite |
| | 904 | 906 | Shale |
| Top Salt | 906 | 1172 | Salt with shale stringers |
| | 1172 | 1176 | Shale |
| TD | | 1176 | |

RECEIVED
DEC 10 1976
O & G CONS. COMM.

672

* 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 report 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

# APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL ☒ RE-ENTER OLD WELL ☐

Williams Energy Company
NAME OF COMPANY OR OPERATOR

P. O. Box 3478 — Address
Tulsa — City
Oklahoma 74101 — State

Signal Oilfield Service, Inc.
Drilling Contractor

1200 Security Life Building, Denver, Colorado 80202
Address

DESCRIPTION OF WELL AND LEASE

| | | |
|---|---|---|
| Federal, State or Indian Lease Number, or if fee lease, name of lessor: Williams Energy Company | Well number: 11 | Elevation (ground): 5355.20' |
| Nearest distance from proposed location to property or lease line: 150 feet | Distance from proposed location to nearest drilling, completed or applied--for well on the same lease: 750 feet | |
| Number of acres in lease: 114 | Number of wells on lease, including this well, completed in or drilling to this reservoir: 11 | |
| If lease, purchased with one or more wells drilled, from whom purchased: Name | Address | |
| Well location (give footage from section lines) 1321.68' E of W bndry & 150' S of N bndry | Section—township—range or block and survey: Sec.8,T18N,R24E,G&SRB&M | Dedication (Comply with Rule 105) |
| Field and reservoir (if wildcat, so state): Unnamed | County: | |
| Distance, in miles, and direction from nearest town or post office: 16 miles west to Holbrook, Arizona | | |
| Proposed depth: 1100 | Rotary or cable tools: Rotary | Approx. date work will start: October 8, 1975 |
| Bond Status Amount | Organization Report: On file Yes Or attached | Filing Fee of $25.00: Attached Yes |

Remarks: Request that commission grant an exception to Rule 105 describing minimum distances since these wells are a part of a liquified petroleum gas storage cavern complex in a salt strata

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Manager of Storage Terminals 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.

Dan J Dougherty
Signature Dan J. Dougherty

10-15-1976
Date

Permit Number: 672
Approval Date: 10-22-76
Approved By: [illegible]

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.

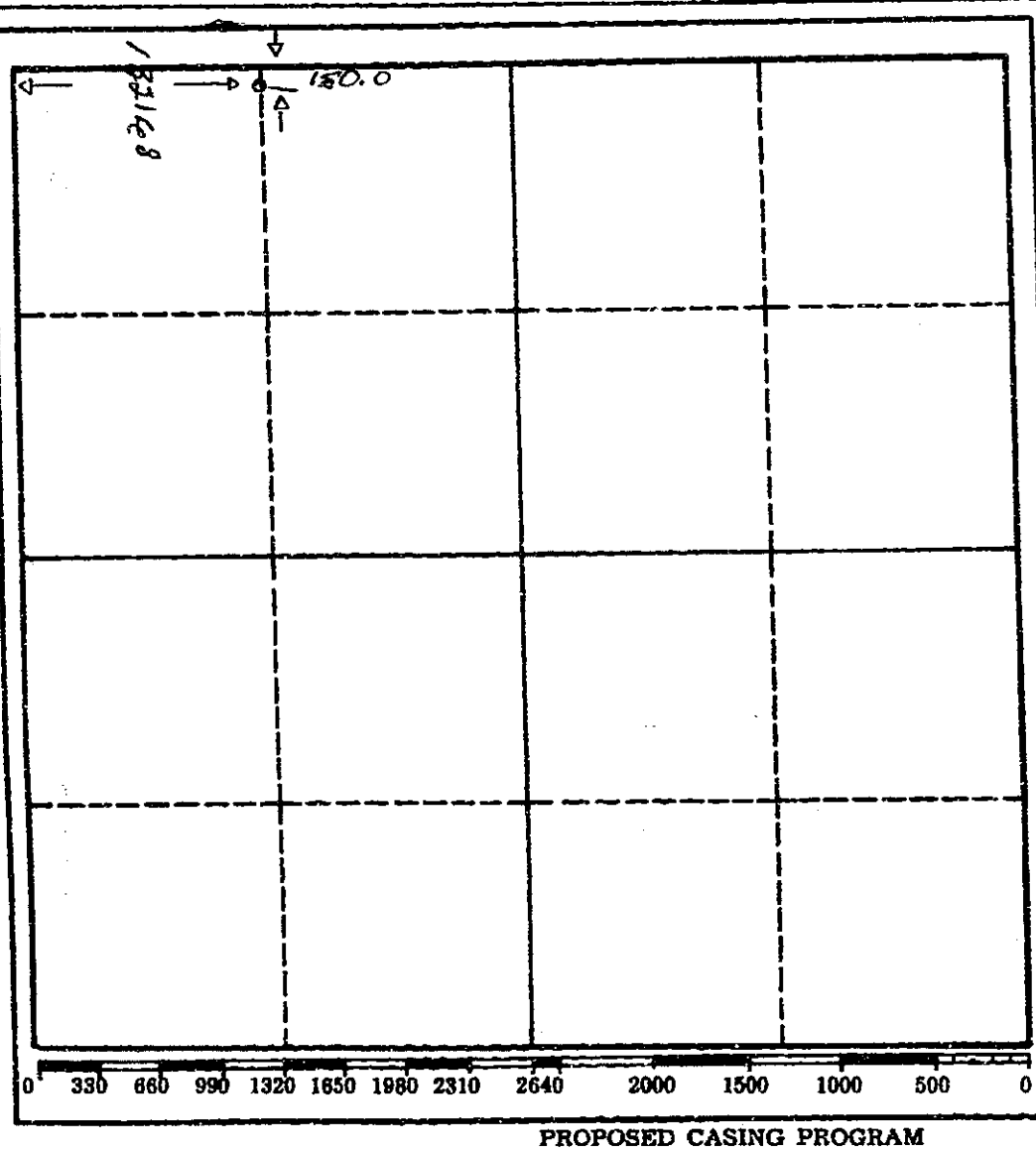
3. All distances shown on the plat must be from the outer boundaries of the Section.

4. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES_____ 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 | GL | 150' | Top to bottom | |
| 9 5/8" | 32.3 | H-40 | GL | 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

Storage Well No. 11
(WELL NAME)

located 1321.68 FWL & 150.0 FNL

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

The NA 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 22 day of October, 19 76.

OIL AND GAS CONSERVATION COMMISSION

By W. E. Allen
EXECUTIVE SECRETARY

PERMIT Nº 672

RECEIPT NO. 715

API No. 02-001-20224

State of Arizona
Oil & Gas Conservation Commission
Permit to Drill

FORM NO. 27

# SONAR SURVEY

MICRO GAGE, INC.

**FERRELLGAS**
**WELL NO. 11** P/N 672
**MARCH 4, 1989**
**ADAMANA FIELD HOLBROOK, ARIZONA**

CUSTOMER REP : DAVE JONES
JOB NO: 62
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: 906'
INTERMEDIATE DIA : 7"
INTERMEDIATE DEPTH : OUT FOR SONAR
TUBING DIA : 4 1/2"
TUBING DEPTH : OUT FOR SONAR
CUSTOMER T.D. 804'
SONAR T.D. 804'

VOLUME REPORT

| DEPTH feet | meters | INCR $ft^3$ | TOTAL $ft^3$ | INCR $m^3$ | TOTAL $m^3$ | INCR bbls | TOTAL bbls |
|---|---|---|---|---|---|---|---|
| 907 | 276.4 | 0 | 0 | 0.0 | 0 | 0.0 | 0 |
| 908 | 276.7 | 2 | 2 | .0 | 0 | .3 | 0 |
| 909 | 277.0 | 2 | 5 | .0 | 0 | .3 | 0 |
| 910 | 277.3 | 2 | 8 | .0 | 0 | .3 | 1 |
| 911 | 277.6 | 2 | 11 | .0 | 0 | .3 | 1 |
| 912 | 277.9 | 2 | 14 | .0 | 0 | .3 | 2 |
| 913 | 278.2 | 2 | 16 | .0 | 0 | .3 | 2 |
| 914 | 278.5 | 2 | 19 | .0 | 0 | .3 | 3 |
| 915 | 278.8 | 2 | 22 | .0 | 0 | .3 | 3 |
| 916 | 279.1 | 2 | 25 | .0 | 0 | .3 | 4 |
| 917 | 279.5 | 2 | 28 | .0 | 0 | .3 | 4 |
| 918 | 279.8 | 2 | 31 | .0 | 0 | .3 | 5 |
| 919 | 280.1 | 2 | 33 | .0 | 0 | .3 | 5 |
| 920 | 280.4 | 2 | 36 | .0 | 1 | .3 | 6 |
| 921 | 280.7 | 2 | 39 | .0 | 1 | .3 | 6 |
| 922 | 281.0 | 2 | 42 | .0 | 1 | .3 | 7 |
| 923 | 281.3 | 2 | 45 | .0 | 1 | .3 | 8 |
| 924 | 281.6 | 2 | 48 | .0 | 1 | .3 | 8 |
| 925 | 281.9 | 2 | 50 | .0 | 1 | .3 | 8 |
| 926 | 282.2 | 2 | 53 | .0 | 1 | .3 | 9 |
| 927 | 282.5 | 2 | 56 | .0 | 1 | .3 | 9 |
| 928 | 282.8 | 2 | 59 | .0 | 1 | .3 | 10 |
| 929 | 283.1 | 2 | 62 | .0 | 1 | .3 | 11 |
| 930 | 283.4 | 2 | 65 | .0 | 1 | .3 | 11 |
| 931 | 283.7 | 4 | 69 | .1 | 1 | .7 | 12 |
| 932 | 284.0 | 10 | 80 | .2 | 2 | 1.7 | 14 |
| 933 | 284.3 | 17 | 97 | .4 | 2 | 3.0 | 17 |
| 934 | 284.6 | 17 | 115 | .4 | 3 | 3.0 | 20 |
| 935 | 284.9 | 10 | 125 | .2 | 3 | 1.7 | 22 |
| 936 | 285.2 | 7 | 133 | .1 | 3 | 1.2 | 23 |
| 937 | 285.5 | 7 | 141 | .1 | 3 | 1.2 | 25 |
| 938 | 285.9 | 6 | 147 | .1 | 4 | 1.0 | 26 |
| 939 | 286.2 | 6 | 154 | .1 | 4 | 1.0 | 27 |
| 940 | 286.5 | 5 | 160 | .1 | 4 | .8 | 28 |
| 941 | 286.8 | 5 | 165 | .1 | 4 | .8 | 29 |
| 942 | 287.1 | 5 | 170 | .1 | 4 | .8 | 30 |
| 943 | 287.4 | 4 | 175 | .1 | 4 | .7 | 31 |
| 944 | 287.7 | 4 | 179 | .1 | 5 | .7 | 31 |
| 945 | 288.0 | 4 | 183 | .1 | 5 | .7 | 32 |
| 946 | 288.3 | 4 | 188 | .1 | 5 | .7 | 33 |
| 947 | 288.6 | 4 | 193 | .1 | 5 | .7 | 34 |
| 948 | 288.9 | 5 | 199 | .1 | 5 | .8 | 35 |
| 949 | 289.2 | 6 | 205 | .1 | 5 | 1.0 | 36 |
| 950 | 289.5 | 7 | 213 | .1 | 6 | 1.2 | 37 |
| 951 | 289.8 | 8 | 221 | .2 | 6 | 1.4 | 39 |
| 952 | 290.1 | 10 | 232 | .2 | 6 | 1.7 | 41 |
| 953 | 290.4 | 12 | 245 | .3 | 6 | 2.1 | 43 |
| 954 | 290.7 | 15 | 260 | .4 | 7 | 2.6 | 46 |
| 955 | 291.0 | 17 | 278 | .4 | 7 | 3.0 | 49 |
| 956 | 291.3 | 20 | 298 | .5 | 8 | 3.5 | 53 |
| 957 | 291.6 | 22 | 321 | .6 | 9 | 3.9 | 57 |
| 958 | 291.9 | 25 | 347 | .7 | 9 | 4.4 | 61 |
| 959 | 292.3 | 29 | 376 | .8 | 10 | 5.1 | 66 |
| 960 | 292.6 | 32 | 408 | .9 | 11 | 5.6 | 72 |

VOLUME REPORT

| DEPTH feet | DEPTH meters | INCR ft³ | TOTAL ft³ | INCR m³ | TOTAL m³ | INCR bbls | TOTAL bbls |
|---|---|---|---|---|---|---|---|
| 961 | 292.9 | 35 | 443 | .9 | 12 | 6.2 | 78 |
| 962 | 293.2 | 35 | 479 | .9 | 13 | 6.2 | 85 |
| 963 | 293.5 | 36 | 516 | 1.0 | 14 | 6.4 | 91 |
| 964 | 293.8 | 37 | 553 | 1.0 | 15 | 6.5 | 98 |
| 965 | 294.1 | 38 | 592 | 1.0 | 16 | 6.7 | 105 |
| 966 | 294.4 | 39 | 631 | 1.1 | 17 | 6.9 | 112 |
| 967 | 294.7 | 38 | 670 | 1.0 | 18 | 6.7 | 119 |
| 968 | 295.0 | 38 | 709 | 1.0 | 20 | 6.7 | 126 |
| 969 | 295.3 | 38 | 748 | 1.0 | 21 | 6.7 | 133 |
| 970 | 295.6 | 38 | 786 | 1.0 | 22 | 6.7 | 139 |
| 971 | 295.9 | 39 | 825 | 1.1 | 23 | 6.9 | 146 |
| 972 | 296.2 | 40 | 866 | 1.1 | 24 | 7.1 | 154 |
| 973 | 296.5 | 41 | 908 | 1.1 | 25 | 7.3 | 161 |
| 974 | 296.8 | 43 | 951 | 1.2 | 26 | 7.6 | 169 |
| 975 | 297.1 | 44 | 996 | 1.2 | 28 | 7.8 | 177 |
| 976 | 297.4 | 40 | 1036 | 1.1 | 29 | 7.1 | 184 |
| 977 | 297.7 | 30 | 1066 | .8 | 30 | 5.3 | 189 |
| 978 | 298.0 | 21 | 1088 | .5 | 30 | 3.7 | 193 |
| 979 | 298.3 | 14 | 1102 | .3 | 31 | 2.4 | 196 |
| 980 | 298.7 | 8 | 1111 | .2 | 31 | 1.4 | 197 |
| 981 | 299.0 | 8 | 1120 | .2 | 31 | 1.4 | 199 |
| 982 | 299.3 | 15 | 1136 | .4 | 32 | 2.6 | 202 |
| 983 | 299.6 | 25 | 1161 | .7 | 32 | 4.4 | 206 |
| 984 | 299.9 | 36 | 1198 | 1.0 | 33 | 6.4 | 213 |
| 985 | 300.2 | 50 | 1248 | 1.4 | 35 | 8.9 | 222 |
| 986 | 300.5 | 51 | 1300 | 1.4 | 36 | 9.0 | 231 |
| 987 | 300.8 | 39 | 1340 | 1.1 | 37 | 6.9 | 238 |
| 988 | 301.1 | 29 | 1369 | .8 | 38 | 5.1 | 243 |
| 989 | 301.4 | 21 | 1391 | .5 | 39 | 3.7 | 247 |
| 990 | 301.7 | 15 | 1406 | .4 | 39 | 2.6 | 250 |
| 991 | 302.0 | 537 | 1943 | 15.2 | 55 | 95.6 | 346 |
| 992 | 302.3 | 3236 | 5179 | 91.6 | 146 | 576.3 | 922 |
| 993 | 302.6 | 8412 | 13592 | 238.2 | 384 | 1498.1 | 2420 |
| 994 | 302.9 | 11819 | 25411 | 334.7 | 719 | 2104.9 | 4525 |
| 995 | 303.2 | 11804 | 37216 | 334.2 | 1053 | 2102.2 | 6628 |
| 996 | 303.5 | 11770 | 48986 | 333.3 | 1387 | 2096.2 | 8724 |
| 997 | 303.8 | 11721 | 60707 | 331.9 | 1719 | 2087.5 | 10811 |
| 998 | 304.1 | 11582 | 72290 | 328.0 | 2047 | 2062.7 | 12874 |
| 999 | 304.4 | 11352 | 83642 | 321.4 | 2368 | 2021.7 | 14896 |
| 1000 | 304.8 | 11129 | 94771 | 315.1 | 2683 | 1982.0 | 16878 |
| 1001 | 305.1 | 10855 | 105626 | 307.4 | 2991 | 1933.2 | 18811 |
| 1002 | 305.4 | 10534 | 116161 | 298.3 | 3289 | 1876.1 | 20688 |
| 1003 | 305.7 | 10337 | 126499 | 292.7 | 3582 | 1841.0 | 22529 |
| 1004 | 306.0 | 10265 | 136765 | 290.7 | 3873 | 1828.1 | 24357 |
| 1005 | 306.3 | 10302 | 147068 | 291.7 | 4164 | 1834.7 | 26192 |
| 1006 | 306.6 | 10449 | 157517 | 295.9 | 4460 | 1860.9 | 28053 |
| 1007 | 306.9 | 10544 | 168062 | 298.6 | 4759 | 1877.8 | 29931 |
| 1008 | 307.2 | 10585 | 178647 | 299.7 | 5059 | 1885.1 | 31817 |
| 1009 | 307.5 | 10627 | 189275 | 300.9 | 5360 | 1892.6 | 33709 |
| 1010 | 307.8 | 10670 | 199946 | 302.1 | 5662 | 1900.3 | 35610 |
| 1011 | 308.1 | 10652 | 210598 | 301.6 | 5964 | 1897.1 | 37507 |
| 1012 | 308.4 | 10573 | 221171 | 299.4 | 6263 | 1883.0 | 39390 |
| 1013 | 308.7 | 10503 | 231675 | 297.4 | 6561 | 1870.5 | 41261 |

VOLUME REPORT

| DEPTH feet | DEPTH meters | INCR ft³ | TOTAL ft³ | INCR m³ | TOTAL m³ | INCR bbls | TOTAL bbls |
|---|---|---|---|---|---|---|---|
| 1014 | 309.0 | 10445 | 242120 | 295.8 | 6856 | 1860.2 | 43121 |
| 1015 | 309.3 | 10161 | 252282 | 287.7 | 7144 | 1809.6 | 44931 |
| 1016 | 309.6 | 9659 | 261941 | 273.5 | 7418 | 1720.2 | 46651 |
| 1017 | 309.9 | 9412 | 271354 | 266.5 | 7684 | 1676.2 | 48328 |
| 1018 | 310.2 | 9412 | 280766 | 266.5 | 7951 | 1676.2 | 50004 |
| 1019 | 310.5 | 9353 | 290120 | 264.8 | 8216 | 1665.7 | 51670 |
| 1020 | 310.8 | 9237 | 299358 | 261.5 | 8477 | 1645.1 | 53315 |
| 1021 | 311.2 | 9181 | 308539 | 260.0 | 8737 | 1635.1 | 54950 |
| 1022 | 311.5 | 9185 | 317725 | 260.1 | 8997 | 1635.8 | 56586 |
| 1023 | 311.8 | 9186 | 326911 | 260.1 | 9258 | 1636.0 | 58222 |
| 1024 | 312.1 | 9182 | 336093 | 260.0 | 9518 | 1635.3 | 59858 |
| 1025 | 312.4 | 9067 | 345160 | 256.7 | 9774 | 1614.8 | 61472 |
| 1026 | 312.7 | 8843 | 354004 | 250.4 | 10025 | 1574.9 | 63048 |
| 1027 | 313.0 | 8625 | 362630 | 244.2 | 10269 | 1536.1 | 64584 |
| 1028 | 313.3 | 8410 | 371040 | 238.1 | 10507 | 1497.8 | 66082 |
| 1029 | 313.6 | 8411 | 379452 | 238.1 | 10746 | 1497.9 | 67580 |
| 1030 | 313.9 | 8650 | 388102 | 244.9 | 10991 | 1540.5 | 69120 |
| 1031 | 314.2 | 8802 | 396905 | 249.2 | 11240 | 1567.6 | 70688 |
| 1032 | 314.5 | 8852 | 405757 | 250.6 | 11491 | 1576.5 | 72265 |
| 1033 | 314.8 | 8904 | 414662 | 252.1 | 11743 | 1585.8 | 73851 |
| 1034 | 315.1 | 8960 | 423623 | 253.7 | 11997 | 1595.7 | 75447 |
| 1035 | 315.4 | 8910 | 432534 | 252.3 | 12249 | 1586.8 | 77034 |
| 1036 | 315.7 | 8756 | 441290 | 247.9 | 12497 | 1559.4 | 78593 |
| 1037 | 316.0 | 8606 | 449896 | 243.7 | 12741 | 1532.7 | 80126 |
| 1038 | 316.3 | 8458 | 458355 | 239.5 | 12980 | 1506.3 | 81633 |
| 1039 | 316.6 | 8314 | 466670 | 235.4 | 13216 | 1480.7 | 83113 |
| 1040 | 316.9 | 8174 | 474844 | 231.4 | 13447 | 1455.7 | 84569 |
| 1041 | 317.2 | 7967 | 482812 | 225.6 | 13673 | 1418.9 | 85988 |
| 1042 | 317.6 | 7710 | 490522 | 218.3 | 13891 | 1373.1 | 87361 |
| 1043 | 317.9 | 7523 | 498046 | 213.0 | 14104 | 1339.8 | 88701 |
| 1044 | 318.2 | 7421 | 505467 | 210.1 | 14314 | 1321.6 | 90023 |
| 1045 | 318.5 | 7394 | 512861 | 209.3 | 14524 | 1316.8 | 91340 |
| 1046 | 318.8 | 7463 | 520325 | 211.3 | 14735 | 1329.1 | 92669 |
| 1047 | 319.1 | 7344 | 527670 | 207.9 | 14943 | 1307.9 | 93978 |
| 1048 | 319.4 | 7019 | 534690 | 198.7 | 15142 | 1250.0 | 95228 |
| 1049 | 319.7 | 6581 | 541271 | 186.3 | 15328 | 1172.0 | 96400 |
| 1050 | 320.0 | 6052 | 547324 | 171.3 | 15500 | 1077.8 | 97478 |
| 1051 | 320.3 | 7944 | 555268 | 224.9 | 15725 | 1414.8 | 98893 |
| 1052 | 320.6 | 13213 | 568482 | 374.1 | 16099 | 2353.2 | 101246 |
| 1053 | 320.9 | 16267 | 584749 | 460.6 | 16560 | 2897.1 | 104143 |
| 1054 | 321.2 | 16112 | 600861 | 456.2 | 17016 | 2869.5 | 107013 |
| 1055 | 321.5 | 15905 | 616767 | 450.4 | 17466 | 2832.6 | 109846 |
| 1056 | 321.8 | 15650 | 632418 | 443.2 | 17910 | 2787.2 | 112633 |
| 1057 | 322.1 | 15926 | 648344 | 451.0 | 18361 | 2836.4 | 115470 |
| 1058 | 322.4 | 16759 | 665103 | 474.6 | 18835 | 2984.7 | 118454 |
| 1059 | 322.7 | 17259 | 682363 | 488.7 | 19324 | 3073.8 | 121528 |
| 1060 | 323.0 | 17402 | 699766 | 492.8 | 19817 | 3099.2 | 124628 |
| 1061 | 323.3 | 17531 | 717298 | 496.4 | 20313 | 3122.2 | 127750 |
| 1062 | 323.6 | 17644 | 734942 | 499.6 | 20813 | 3142.3 | 130893 |
| 1063 | 324.0 | 17545 | 752588 | 499.7 | 21313 | 3142.5 | 134035 |
| 1064 | 324.3 | 17534 | 770122 | 496.5 | 21809 | 3122.8 | 137158 |
| 1065 | 324.6 | 17407 | 787530 | 492.9 | 22302 | 3100.1 | 140259 |
| 1066 | 324.9 | 17266 | 804796 | 488.9 | 22791 | 3075.0 | 143334 |

VOLUME REPORT

| DEPTH feet | DEPTH meters | INCR $ft^3$ | TOTAL $ft^3$ | INCR $m^3$ | TOTAL $m^3$ | INCR bbls | TOTAL bbls |
|---|---|---|---|---|---|---|---|
| 1067 | 325.2 | 17363 | 822160 | 491.7 | 23283 | 3092.3 | 146426 |
| 1068 | 325.5 | 17702 | 839862 | 501.3 | 23784 | 3152.7 | 149579 |
| 1069 | 325.8 | 18066 | 857929 | 511.6 | 24296 | 3217.5 | 152797 |
| 1070 | 326.1 | 18453 | 876382 | 522.5 | 24819 | 3286.4 | 156083 |
| 1071 | 326.4 | 18582 | 894964 | 526.2 | 25345 | 3309.4 | 159393 |
| 1072 | 326.7 | 18445 | 913410 | 522.3 | 25867 | 3285.0 | 162678 |
| 1073 | 327.0 | 18311 | 931722 | 518.5 | 26386 | 3261.1 | 165939 |
| 1074 | 327.3 | 18179 | 949902 | 514.8 | 26901 | 3237.6 | 169177 |
| 1075 | 327.6 | 18050 | 967952 | 511.1 | 27412 | 3214.7 | 172392 |
| 1076 | 327.9 | 17845 | 985798 | 505.3 | 27917 | 3178.1 | 175570 |
| 1077 | 328.2 | 17573 | 1003371 | 497.6 | 28415 | 3129.7 | 178700 |
| 1078 | 328.5 | 17306 | 1020678 | 490.1 | 28905 | 3082.1 | 181782 |
| 1079 | 328.8 | 17045 | 1037724 | 482.7 | 29388 | 3035.7 | 184818 |
| 1080 | 329.1 | 16791 | 1054515 | 475.5 | 29863 | 2990.4 | 187809 |
| 1081 | 329.4 | 16394 | 1070910 | 464.2 | 30328 | 2919.7 | 190729 |
| 1082 | 329.7 | 15868 | 1086778 | 449.3 | 30777 | 2826.0 | 193555 |
| 1083 | 330.0 | 15353 | 1102131 | 434.7 | 31212 | 2734.3 | 196289 |
| 1084 | 330.4 | 14848 | 1116980 | 420.4 | 31632 | 2644.4 | 198934 |
| 1085 | 330.7 | 14354 | 1131335 | 406.5 | 32039 | 2556.4 | 201490 |
| 1086 | 331.0 | 13798 | 1145133 | 390.7 | 32430 | 2457.4 | 203948 |
| 1087 | 331.3 | 13200 | 1158334 | 373.8 | 32804 | 2350.9 | 206299 |
| 1088 | 331.6 | 12618 | 1170952 | 357.3 | 33161 | 2247.2 | 208546 |
| 1089 | 331.9 | 12051 | 1183004 | 341.2 | 33502 | 2146.2 | 210693 |
| 1090 | 332.2 | 11500 | 1194504 | 325.6 | 33828 | 2048.1 | 212741 |
| 1091 | 332.5 | 10955 | 1205460 | 310.2 | 34138 | 1951.0 | 214692 |
| 1092 | 332.8 | 10432 | 1215893 | 295.4 | 34434 | 1857.9 | 216550 |
| 1093 | 333.1 | 9873 | 1225766 | 279.6 | 34713 | 1758.3 | 218308 |
| 1094 | 333.4 | 9287 | 1235054 | 263.0 | 34976 | 1654.0 | 219963 |
| 1095 | 333.7 | 8655 | 1243709 | 245.1 | 35221 | 1541.4 | 221504 |
| 1096 | 334.0 | 7996 | 1251706 | 226.4 | 35448 | 1424.0 | 222928 |
| 1097 | 334.3 | 7363 | 1259069 | 208.5 | 35656 | 1311.3 | 224240 |
| 1098 | 334.6 | 6755 | 1265825 | 191.3 | 35848 | 1203.0 | 225443 |
| 1099 | 334.9 | 5588 | 1271414 | 158.2 | 36006 | 995.2 | 226438 |
| 1100 | 335.2 | 4108 | 1275522 | 116.3 | 36122 | 731.6 | 227170 |
| 1101 | 335.5 | 2461 | 1277984 | 69.6 | 36192 | 438.3 | 227608 |
| 1102 | 335.8 | 615 | 1278599 | 17.4 | 36209 | 109.5 | 227718 |

VOLUME REPORT

| DEPTH feet | DEPTH meters | INCR $ft^3$ | TOTAL $ft^3$ | INCR $m^3$ | TOTAL $m^3$ | INCR bbls | TOTAL bbls |
|---|---|---|---|---|---|---|---|
| 907 | 276.4 | 0 | 0 | 0.0 | 0 | 0.0 | 0 |
| 910 | 277.3 | 8 | 8 | .2 | 0 | 1.4 | 1 |
| 915 | 278.8 | 14 | 22 | .3 | 0 | 2.4 | 3 |
| 920 | 280.4 | 14 | 36 | .3 | 1 | 2.4 | 6 |
| 925 | 281.9 | 14 | 50 | .3 | 1 | 2.4 | 8 |
| 930 | 283.4 | 14 | 65 | .3 | 1 | 2.4 | 11 |
| 933 | 284.3 | 32 | 97 | .9 | 2 | 5.6 | 17 |
| 935 | 284.9 | 28 | 125 | .7 | 3 | 4.9 | 22 |
| 945 | 288.0 | 57 | 183 | 1.6 | 5 | 10.1 | 32 |
| 950 | 289.5 | 29 | 213 | .8 | 6 | 5.1 | 37 |
| 960 | 292.6 | 195 | 408 | 5.5 | 11 | 34.7 | 72 |
| 965 | 294.1 | 183 | 592 | 5.1 | 16 | 32.5 | 105 |
| 970 | 295.6 | 194 | 786 | 5.4 | 22 | 34.5 | 139 |
| 975 | 297.1 | 209 | 996 | 5.9 | 28 | 37.2 | 177 |
| 980 | 298.7 | 115 | 1111 | 3.2 | 31 | 20.4 | 197 |
| 985 | 300.2 | 137 | 1248 | 3.8 | 35 | 24.3 | 222 |
| 990 | 301.7 | 157 | 1406 | 4.4 | 39 | 27.9 | 250 |
| 993 | 302.6 | 12185 | 13592 | 345.0 | 384 | 2170.1 | 2420 |
| 995 | 303.2 | 23624 | 37216 | 669.0 | 1053 | 4207.4 | 6628 |
| 997 | 303.8 | 23491 | 60707 | 665.2 | 1719 | 4183.7 | 10811 |
| 1000 | 304.8 | 34063 | 94771 | 964.6 | 2683 | 6066.6 | 16878 |
| 1002 | 305.4 | 21390 | 116161 | 605.7 | 3289 | 3809.5 | 20688 |
| 1004 | 306.0 | 20603 | 136765 | 583.4 | 3873 | 3669.3 | 24357 |
| 1006 | 306.6 | 20752 | 157517 | 587.6 | 4460 | 3695.9 | 28053 |
| 1010 | 307.8 | 42428 | 199946 | 1201.5 | 5662 | 7556.4 | 35610 |
| 1012 | 308.4 | 21225 | 221171 | 601.0 | 6263 | 3780.1 | 39390 |
| 1014 | 309.0 | 20948 | 242120 | 593.2 | 6856 | 3730.8 | 43121 |
| 1016 | 309.6 | 19821 | 261941 | 561.3 | 7418 | 3530.1 | 46651 |
| 1018 | 310.2 | 18824 | 280766 | 533.0 | 7951 | 3352.5 | 50004 |
| 1020 | 310.8 | 18591 | 299358 | 526.4 | 8477 | 3311.0 | 53315 |
| 1022 | 311.5 | 18367 | 317725 | 520.1 | 8997 | 3271.1 | 56586 |
| 1024 | 312.1 | 18368 | 336093 | 520.1 | 9518 | 3271.3 | 59858 |
| 1028 | 313.3 | 34946 | 371040 | 989.6 | 10507 | 6223.8 | 66082 |
| 1030 | 313.9 | 17062 | 388102 | 483.1 | 10991 | 3038.7 | 69120 |
| 1034 | 315.1 | 35520 | 423623 | 1005.9 | 11997 | 6326.1 | 75447 |
| 1040 | 316.9 | 51221 | 474844 | 1450.5 | 13447 | 9122.4 | 84569 |
| 1042 | 317.6 | 15678 | 490522 | 444.0 | 13891 | 2792.2 | 87361 |
| 1044 | 318.2 | 14944 | 505467 | 423.2 | 14314 | 2661.5 | 90023 |
| 1046 | 318.8 | 14858 | 520325 | 420.7 | 14735 | 2646.2 | 92669 |
| 1048 | 319.4 | 14364 | 534690 | 406.7 | 15142 | 2558.2 | 95228 |
| 1050 | 320.0 | 12634 | 547324 | 357.7 | 15500 | 2250.1 | 97478 |
| 1052 | 320.6 | 21158 | 568482 | 599.1 | 16099 | 3768.2 | 101246 |
| 1054 | 321.2 | 32379 | 600861 | 916.9 | 17016 | 5766.6 | 107013 |
| 1056 | 321.8 | 31556 | 632418 | 893.6 | 17910 | 5620.1 | 112633 |
| 1058 | 322.4 | 32685 | 665103 | 925.6 | 18835 | 5821.1 | 118454 |
| 1060 | 323.0 | 34662 | 699766 | 981.6 | 19817 | 6173.3 | 124628 |
| 1062 | 323.6 | 35175 | 734942 | 996.1 | 20813 | 6264.6 | 130893 |
| 1064 | 324.3 | 35180 | 770122 | 996.2 | 21809 | 6265.5 | 137158 |
| 1066 | 324.9 | 34673 | 804796 | 981.9 | 22791 | 6175.2 | 143334 |
| 1068 | 325.5 | 35066 | 839862 | 993.0 | 23784 | 6245.2 | 149579 |
| 1070 | 326.1 | 36519 | 876382 | 1034.2 | 24819 | 6504.0 | 156083 |
| 1075 | 327.6 | 91570 | 967952 | 2593.2 | 27412 | 16308.6 | 172392 |
| 1080 | 329.1 | 86562 | 1054515 | 2451.4 | 29863 | 15416.6 | 187809 |
| 1085 | 330.7 | 76820 | 1131335 | 2175.5 | 32039 | 13681.6 | 201490 |

VOLUME REPORT

| DEPTH feet | DEPTH meters | INCR $ft^3$ | TOTAL $ft^3$ | INCR $m^3$ | TOTAL $m^3$ | INCR bbls | TOTAL bbls |
|---|---|---|---|---|---|---|---|
| 1090 | 332.2 | 63169 | 1194504 | 1788.9 | 33828 | 11250.3 | 212741 |
| 1092 | 332.8 | 21388 | 1215893 | 605.7 | 34434 | 3809.2 | 216550 |
| 1094 | 333.4 | 19161 | 1235054 | 542.6 | 34976 | 3412.5 | 219963 |
| 1096 | 334.0 | 16652 | 1251706 | 471.5 | 35448 | 2965.7 | 222928 |
| 1098 | 334.6 | 14119 | 1265825 | 399.8 | 35848 | 2514.5 | 225443 |
| 1100 | 335.2 | 9696 | 1275522 | 274.5 | 36122 | 1726.8 | 227170 |
| 1101 | 335.5 | 2461 | 1277984 | 69.6 | 36192 | 438.3 | 227608 |
| 1102 | 335.8 | 615 | 1278599 | 17.4 | 36209 | 109.5 | 227718 |

## MAJOR COMPASS RADII

Depth & Radii in feet

| DEPTH | TILT | N | NE | E | SE | S | SW | W | NW |
|---|---|---|---|---|---|---|---|---|---|
| 907 | 90 | 1.2 | 1.2 | 1.2 | .9 | .9 | .8 | .8 | 1.2 |
| 910 | 90 | 1.2 | 1.2 | 1.2 | .9 | .9 | .8 | .8 | 1.2 |
| 915 | 90 | 1.2 | 1.2 | 1.2 | .9 | .9 | .8 | .8 | 1.2 |
| 920 | 90 | 1.2 | 1.2 | 1.2 | .9 | .9 | .8 | .8 | 1.2 |
| 925 | 90 | 1.2 | 1.2 | 1.2 | .9 | .9 | .8 | .8 | 1.2 |
| 930 | 90 | 1.2 | 1.2 | 1.2 | .9 | .9 | .8 | .8 | 1.2 |
| 933 | 90 | 2.2 | 2.8 | 2.5 | 2.4 | 2.0 | 2.1 | 2.9 | 3.2 |
| 935 | 90 | 1.3 | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 1.0 | .9 |
| 945 | 90 | 1.6 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 1.2 | 1.5 |
| 950 | 90 | 1.9 | 2.1 | 1.6 | 1.5 | 1.2 | 1.5 | 1.3 | 1.6 |
| 960 | 90 | 3.5 | 3.6 | 3.3 | 3.2 | 3.1 | 3.2 | 3.1 | 3.4 |
| 965 | 90 | 3.9 | 4.0 | 3.6 | 3.5 | 3.1 | 3.2 | 3.4 | 3.6 |
| 970 | 90 | 3.5 | 3.9 | 3.3 | 3.2 | 2.8 | 3.3 | 3.6 | 3.8 |
| 975 | 90 | 4.2 | 4.2 | 4.0 | 3.9 | 3.0 | 3.5 | 3.5 | 3.9 |
| 980 | 90 | 1.8 | 1.4 | 1.3 | 1.0 | 1.1 | 1.0 | 1.7 | 1.9 |
| 985 | 90 | 4.2 | 3.9 | 5.3 | 5.1 | 4.5 | 4.8 | 4.0 | 2.6 |
| 990 | 90 | .8 | .9 | .9 | 1.2 | 1.3 | 2.3 | 3.4 | 3.7 |
| 993 | 90 | 61.0 | 61.8 | 65.4 | 62.1 | 59.8 | 60.4 | 61.2 | 59.3 |
| 995 | 90 | 59.4 | 59.9 | 62.1 | 65.1 | 62.3 | 59.9 | 60.4 | 61.5 |
| 997 | 90 | 61.5 | 64.2 | 63.8 | 60.4 | 59.0 | 59.9 | 59.7 | 59.7 |
| 1000 | 90 | 59.5 | 58.0 | 60.9 | 63.1 | 59.2 | 54.6 | 56.6 | 60.5 |
| 1002 | 90 | 57.6 | 57.7 | 60.8 | 61.0 | 58.0 | 53.3 | 54.1 | 58.3 |
| 1004 | 90 | 55.0 | 54.6 | 59.1 | 60.5 | 58.7 | 56.6 | 55.4 | 53.3 |
| 1006 | 90 | 56.1 | 55.6 | 59.5 | 60.3 | 59.2 | 57.4 | 57.2 | 54.6 |
| 1010 | 90 | 57.3 | 58.9 | 60.6 | 59.5 | 58.9 | 56.1 | 56.8 | 56.6 |
| 1012 | 90 | 57.6 | 59.9 | 60.4 | 57.7 | 54.9 | 57.1 | 55.8 | 57.3 |
| 1014 | 90 | 56.8 | 57.2 | 59.3 | 59.5 | 58.2 | 56.1 | 57.7 | 55.6 |
| 1016 | 90 | 53.4 | 57.2 | 57.7 | 57.6 | 53.2 | 52.5 | 53.0 | 52.5 |
| 1018 | 90 | 53.4 | 57.2 | 57.7 | 57.6 | 53.2 | 52.5 | 53.0 | 52.5 |
| 1020 | 90 | 52.7 | 56.0 | 56.5 | 57.7 | 52.7 | 51.4 | 52.6 | 52.2 |
| 1022 | 90 | 50.5 | 54.4 | 56.8 | 58.3 | 53.0 | 51.1 | 51.7 | 54.0 |
| 1024 | 90 | 51.1 | 55.1 | 57.9 | 57.6 | 53.9 | 50.6 | 50.1 | 54.2 |
| 1028 | 90 | 49.4 | 54.2 | 55.5 | 54.7 | 51.4 | 46.7 | 45.2 | 51.1 |
| 1030 | 90 | 49.0 | 52.4 | 55.6 | 54.2 | 53.3 | 47.1 | 54.2 | 53.5 |
| 1034 | 90 | 47.2 | 55.3 | 64.0 | 55.0 | 53.8 | 46.2 | 53.3 | 54.5 |
| 1040 | 90 | 43.2 | 48.9 | 69.6 | 51.7 | 61.9 | 42.1 | 48.4 | 53.7 |
| 1042 | 90 | 42.1 | 45.7 | 69.0 | 48.6 | 46.5 | 40.0 | 47.2 | 50.1 |
| 1044 | 90 | 38.9 | 44.4 | 67.2 | 49.2 | 44.5 | 39.6 | 48.1 | 59.9 |
| 1046 | 90 | 36.4 | 62.2 | 62.8 | 48.5 | 41.0 | 37.2 | 48.5 | 60.0 |
| 1048 | 90 | 33.8 | 63.1 | 62.1 | 45.8 | 38.9 | 33.7 | 46.8 | 59.2 |
| 1050 | 90 | 30.6 | 58.0 | 43.2 | 44.3 | 38.4 | 28.5 | 43.6 | 55.8 |
| 1052 | 90 | 71.7 | 73.5 | 77.2 | 72.3 | 70.5 | 68.2 | 70.6 | 70.7 |
| 1054 | 90 | 71.9 | 73.0 | 77.2 | 72.3 | 69.9 | 68.3 | 66.1 | 69.0 |
| 1056 | 90 | 71.6 | 72.2 | 75.4 | 70.9 | 68.7 | 67.4 | 66.8 | 68.0 |
| 1058 | 90 | 71.2 | 72.0 | 75.5 | 78.8 | 75.6 | 73.5 | 71.8 | 69.6 |
| 1060 | 90 | 72.5 | 74.7 | 77.5 | 78.7 | 75.7 | 73.6 | 70.6 | 72.6 |
| 1062 | 90 | 75.1 | 73.8 | 77.5 | 78.4 | 76.1 | 73.5 | 71.9 | 73.6 |
| 1064 | 90 | 74.9 | 76.2 | 76.5 | 80.0 | 75.7 | 70.0 | 71.5 | 72.9 |
| 1066 | 90 | 74.2 | 74.2 | 74.6 | 76.4 | 75.6 | 73.9 | 72.5 | 69.4 |
| 1068 | 90 | 74.5 | 74.5 | 76.3 | 78.4 | 77.4 | 75.1 | 75.8 | 73.0 |

## MAJOR COMPASS RADII

Depth & Radii in feet

| DEPTH | TILT | N | NE | E | SE | S | SW | W | NW |
|---|---|---|---|---|---|---|---|---|---|
| 1070 | 90 | 75.5 | 76.5 | 79.7 | 82.3 | 79.1 | 75.1 | 76.8 | 75.9 |
| 1075 | 90 | 76.5 | 76.8 | 80.2 | 79.7 | 76.4 | 75.8 | 73.8 | 70.8 |
| 1080 | 90 | 71.9 | 73.3 | 71.3 | 75.6 | 79.7 | 72.9 | 72.9 | 69.2 |
| 1085 | 90 | 71.4 | 66.0 | 65.2 | 70.4 | 68.9 | 67.2 | 64.6 | 62.3 |
| 1090 | 90 | 61.0 | 60.6 | 50.9 | 64.1 | 61.6 | 65.2 | 58.7 | 51.6 |
| 1092 | 90 | 57.7 | 56.3 | 44.2 | 59.8 | 60.5 | 63.1 | 56.5 | 47.0 |
| 1094 | 90 | 54.8 | 51.7 | 43.9 | 59.2 | 56.0 | 60.1 | 53.7 | 44.6 |
| 1096 | 90 | 51.6 | 47.4 | 35.5 | 54.7 | 54.2 | 58.2 | 52.0 | 41.3 |
| 1098 | 90 | 48.0 | 49.0 | 33.9 | 51.4 | 52.7 | 54.6 | 50.3 | 33.0 |
| 1100 | 90 | 19.5 | 24.9 | 28.3 | 31.9 | 36.2 | 51.1 | 39.0 | 28.6 |
| 1101 | 90 | 16.2 | 18.5 | 19.5 | 19.2 | 28.7 | 21.0 | 20.2 | 15.2 |
| 1102 | 90 | 2.5 | 3.0 | 3.0 | 3.2 | 2.7 | 3.7 | 2.5 | 2.5 |

# 5 DEGREE RADII REPORT

Radii in feet

| AZ | DEPTH: 907 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 |
| 45 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 90 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | .9 | .9 | .9 |
| 135 | .9 | 1.1 | .9 | .9 | .9 | .9 | .8 | .9 | .8 |
| 180 | .9 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 |
| 225 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 |
| 270 | .8 | .8 | .8 | 1.0 | 1.3 | 1.2 | .9 | 1.1 | 1.2 |
| 315 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 |

| AZ | DEPTH: 910 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 |
| 45 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 90 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | .9 | .9 | .9 |
| 135 | .9 | 1.1 | .9 | .9 | .9 | .9 | .8 | .9 | .8 |
| 180 | .9 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 |
| 225 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 |
| 270 | .8 | .8 | .8 | 1.0 | 1.3 | 1.2 | .9 | 1.1 | 1.2 |
| 315 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 |

| AZ | DEPTH: 915 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 |
| 45 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 90 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | .9 | .9 | .9 |
| 135 | .9 | 1.1 | .9 | .9 | .9 | .9 | .8 | .9 | .8 |
| 180 | .9 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 |
| 225 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 |
| 270 | .8 | .8 | .8 | 1.0 | 1.3 | 1.2 | .9 | 1.1 | 1.2 |
| 315 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 |

| AZ | DEPTH: 920 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 |
| 45 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 90 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | .9 | .9 | .9 |
| 135 | .9 | 1.1 | .9 | .9 | .9 | .9 | .8 | .9 | .8 |
| 180 | .9 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 |
| 225 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 |
| 270 | .8 | .8 | .8 | 1.0 | 1.3 | 1.2 | .9 | 1.1 | 1.2 |
| 315 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 |

| AZ | DEPTH: 925 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 |
| 45 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 90 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | .9 | .9 | .9 |
| 135 | .9 | 1.1 | .9 | .9 | .9 | .9 | .8 | .9 | .8 |
| 180 | .9 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 |
| 225 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 |
| 270 | .8 | .8 | .8 | 1.0 | 1.3 | 1.2 | .9 | 1.1 | 1.2 |
| 315 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 |

# 5 DEGREE RADII REPORT

Radii in feet

| AZ | DEPTH: 930 ft | | | TILT: 90 degrees | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 |
| 45 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 90 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | .9 | .9 | .9 |
| 135 | .9 | 1.1 | .9 | .9 | .9 | .9 | .8 | .9 | .8 |
| 180 | .9 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 |
| 225 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 | .8 |
| 270 | .8 | .8 | .8 | 1.0 | 1.3 | 1.2 | .9 | 1.1 | 1.2 |
| 315 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 |

| AZ | DEPTH: 933 ft | | | TILT: 90 degrees | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 2.2 | 2.4 | 2.8 | 3.2 | 3.2 | 3.2 | 3.2 | 3.0 | 2.9 |
| 45 | 2.8 | 2.8 | 2.8 | 2.8 | 2.9 | 2.6 | 2.4 | 2.3 | 2.3 |
| 90 | 2.5 | 2.3 | 2.6 | 2.4 | 2.4 | 2.2 | 2.5 | 2.6 | 2.3 |
| 135 | 2.4 | 2.6 | 2.5 | 2.3 | 2.2 | 2.2 | 2.4 | 2.2 | 2.2 |
| 180 | 2.0 | 2.1 | 2.2 | 2.1 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 |
| 225 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.5 | 2.9 | 2.6 |
| 270 | 2.9 | 3.1 | 3.1 | 2.9 | 3.7 | 3.4 | 3.3 | 3.3 | 3.2 |
| 315 | 3.2 | 3.0 | 2.8 | 2.9 | 2.8 | 2.8 | 3.2 | 2.2 | 2.2 |

| AZ | DEPTH: 935 ft | | | TILT: 90 degrees | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.3 | 1.3 | 1.4 | 1.8 | 1.7 | 1.6 | 1.6 | 1.6 | 1.7 |
| 45 | 1.7 | 1.7 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.7 | 1.7 |
| 90 | 1.7 | 1.7 | 1.9 | 2.0 | 2.0 | 2.1 | 2.2 | 2.1 | 2.0 |
| 135 | 1.9 | 1.7 | 1.7 | 1.7 | 1.7 | 1.8 | 1.7 | 1.9 | 1.9 |
| 180 | 1.9 | 1.7 | 1.7 | 1.7 | 1.8 | 1.7 | 1.8 | 1.8 | 1.9 |
| 225 | 1.9 | 2.0 | 2.1 | 2.4 | 2.4 | 2.0 | 2.0 | 1.1 | 1.0 |
| 270 | 1.0 | .9 | .8 | .8 | .8 | .7 | .8 | .9 | .9 |
| 315 | .9 | 1.2 | 1.3 | 1.3 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 |

| AZ | DEPTH: 945 ft | | | TILT: 90 degrees | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.6 | 1.3 | 1.4 | 1.4 | 1.3 | 1.1 | 1.2 | 1.1 | 1.1 |
| 45 | 1.1 | 1.2 | 1.0 | 1.2 | 1.1 | 1.0 | 1.0 | 1.1 | 1.1 |
| 90 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 135 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 180 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 225 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.3 |
| 270 | 1.2 | 1.1 | 1.1 | 1.2 | 1.3 | 1.3 | 1.5 | 1.5 | 1.5 |
| 315 | 1.5 | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |

| AZ | DEPTH: 950 ft | | | TILT: 90 degrees | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.8 |
| 45 | 2.1 | 2.1 | 2.1 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 90 | 1.6 | 1.7 | 1.7 | 1.6 | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 |
| 135 | 1.5 | 1.5 | 1.6 | 1.6 | 1.6 | 1.3 | 1.5 | 1.3 | 1.3 |
| 180 | 1.2 | 1.2 | 1.2 | 1.3 | 1.4 | 1.4 | 1.6 | 1.6 | 1.6 |
| 225 | 1.5 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.4 |
| 270 | 1.3 | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.7 | 1.6 | 1.6 |
| 315 | 1.6 | 2.2 | 2.2 | 2.2 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |

5 DEGREE RADII REPORT

Radii in feet

| AZ | DEPTH: 960 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 3.5 | 3.5 | 3.6 | 3.6 | 3.5 | 3.5 | 3.5 | 3.5 | 3.6 |
| 45 | 3.6 | 3.5 | 3.5 | 3.6 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 90 | 3.3 | 3.3 | 3.3 | 3.4 | 3.5 | 3.4 | 3.3 | 3.3 | 3.2 |
| 135 | 3.2 | 3.2 | 3.2 | 3.2 | 3.1 | 3.2 | 3.2 | 3.2 | 2.9 |
| 180 | 3.1 | 3.1 | 3.0 | 3.0 | 2.9 | 3.0 | 2.9 | 3.0 | 3.1 |
| 225 | 3.2 | 3.2 | 3.1 | 3.1 | 3.2 | 3.1 | 3.1 | 3.0 | 3.1 |
| 270 | 3.1 | 3.2 | 3.3 | 3.2 | 3.2 | 3.2 | 3.2 | 3.4 | 3.3 |
| 315 | 3.4 | 3.3 | 3.5 | 3.5 | 3.5 | 3.6 | 3.6 | 3.6 | 3.5 |

| AZ | DEPTH: 965 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.8 | 3.9 | 3.9 | 3.9 |
| 45 | 4.0 | 4.0 | 4.0 | 3.9 | 3.9 | 3.7 | 3.8 | 3.7 | 3.7 |
| 90 | 3.6 | 3.5 | 3.7 | 3.5 | 3.5 | 3.5 | 3.6 | 3.5 | 3.5 |
| 135 | 3.5 | 3.4 | 3.4 | 3.4 | 3.4 | 3.2 | 3.3 | 3.3 | 3.2 |
| 180 | 3.1 | 3.1 | 3.2 | 3.2 | 3.2 | 3.2 | 3.1 | 3.2 | 3.2 |
| 225 | 3.2 | 3.2 | 3.2 | 2.9 | 3.2 | 3.2 | 3.3 | 3.3 | 3.2 |
| 270 | 3.4 | 3.4 | 3.5 | 3.4 | 3.3 | 3.4 | 3.4 | 3.4 | 3.5 |
| 315 | 3.6 | 3.7 | 3.6 | 3.7 | 3.7 | 3.7 | 3.7 | 3.8 | 3.9 |

| AZ | DEPTH: 970 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 3.5 | 3.7 | 3.6 | 3.5 | 3.5 | 3.7 | 3.8 | 3.7 | 3.8 |
| 45 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.7 | 3.6 | 3.5 | 3.4 |
| 90 | 3.3 | 3.5 | 3.7 | 3.7 | 3.7 | 3.6 | 3.5 | 3.4 | 3.2 |
| 135 | 3.2 | 3.2 | 2.9 | 3.2 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 180 | 2.8 | 2.8 | 3.1 | 3.0 | 3.4 | 3.2 | 3.4 | 3.2 | 3.4 |
| 225 | 3.3 | 3.5 | 3.4 | 3.4 | 3.4 | 3.5 | 3.5 | 3.5 | 3.6 |
| 270 | 3.6 | 3.7 | 3.8 | 3.8 | 3.8 | 3.7 | 3.8 | 3.9 | 3.7 |
| 315 | 3.8 | 3.8 | 3.7 | 3.2 | 3.2 | 3.4 | 3.5 | 3.9 | 3.5 |

| AZ | DEPTH: 975 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 4.2 | 4.1 | 4.2 | 4.2 | 4.2 | 4.2 | 4.3 | 4.2 | 4.3 |
| 45 | 4.2 | 4.3 | 4.3 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| 90 | 4.0 | 4.1 | 4.1 | 3.9 | 3.9 | 3.9 | 4.0 | 3.9 | 3.9 |
| 135 | 3.9 | 3.9 | 3.8 | 3.7 | 3.6 | 3.7 | 3.5 | 3.4 | 3.5 |
| 180 | 3.0 | 2.9 | 3.3 | 3.2 | 3.2 | 3.2 | 3.5 | 3.3 | 3.4 |
| 225 | 3.5 | 3.5 | 3.4 | 3.5 | 3.4 | 3.4 | 3.4 | 3.5 | 3.5 |
| 270 | 3.5 | 3.5 | 3.6 | 3.8 | 3.7 | 3.8 | 3.8 | 3.8 | 3.9 |
| 315 | 3.9 | 3.9 | 3.9 | 4.1 | 3.9 | 3.9 | 4.1 | 4.1 | 4.1 |

| AZ | DEPTH: 980 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1.8 | 1.7 | 1.7 | 1.6 | 1.6 | 1.6 | 1.4 | 1.4 | 1.3 |
| 45 | 1.4 | 1.3 | 1.4 | 1.4 | 1.3 | 1.4 | 1.3 | 1.4 | 1.3 |
| 90 | 1.3 | 1.2 | 1.1 | 1.1 | 1.1 | 1.2 | 1.1 | 1.0 | 1.0 |
| 135 | 1.0 | 1.2 | 1.0 | 1.1 | 1.0 | 1.1 | 1.0 | 1.2 | 1.1 |
| 180 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.2 | 1.2 | 1.2 | 1.3 |
| 225 | 1.0 | 1.3 | 1.2 | 1.3 | 1.3 | 1.3 | 1.4 | 1.4 | 1.6 |
| 270 | 1.7 | 1.6 | 1.7 | 1.6 | 1.6 | 1.6 | 1.7 | 1.6 | 1.8 |
| 315 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 |

5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 985 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 4.2 | 4.2 | 4.2 | 4.0 | 4.0 | 4.0 | 3.9 | 3.6 | 3.8 |
| 45 | 3.9 | 4.1 | 4.2 | 4.3 | 4.3 | 5.2 | 5.2 | 5.2 | 5.4 |
| 90 | 5.3 | 5.3 | 5.0 | 5.4 | 5.2 | 5.2 | 4.9 | 5.0 | 4.8 |
| 135 | 5.1 | 5.0 | 4.2 | 4.2 | 4.2 | 4.3 | 4.3 | 4.4 | 4.4 |
| 180 | 4.5 | 4.5 | 4.7 | 4.8 | 4.8 | 4.8 | 4.8 | 4.7 | 4.9 |
| 225 | 4.8 | 4.7 | 4.5 | 4.4 | 4.2 | 4.3 | 4.3 | 4.2 | 4.2 |
| 270 | 4.0 | 4.5 | 3.5 | 2.9 | 2.6 | 2.5 | 2.3 | 2.3 | 2.4 |
| 315 | 2.6 | 2.9 | 3.0 | 3.1 | 3.0 | 3.2 | 4.7 | 4.4 | 4.2 |

AZ DEPTH: 990 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | .8 | .8 | .9 | .8 | .9 | .8 | .8 | .9 | .8 |
| 45 | .9 | .8 | .9 | .9 | .9 | .9 | .9 | .9 | .8 |
| 90 | .9 | .8 | .9 | .9 | .9 | 1.0 | 1.0 | 1.1 | 1.2 |
| 135 | 1.2 | 1.1 | 1.3 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 |
| 180 | 1.3 | 1.3 | 1.6 | 1.7 | 1.8 | 2.1 | 2.5 | 2.6 | 2.2 |
| 225 | 2.3 | 2.5 | 2.4 | 2.3 | 2.6 | 3.5 | 4.0 | 3.9 | 3.2 |
| 270 | 3.4 | 3.3 | 3.4 | 3.5 | 3.7 | 3.8 | 3.9 | 3.9 | 4.0 |
| 315 | 3.7 | 3.2 | 3.2 | 1.6 | .8 | .9 | .7 | .8 | .8 |

AZ DEPTH: 993 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 61.0 | 61.0 | 61.2 | 61.2 | 61.2 | 61.2 | 62.7 | 62.7 | 62.6 |
| 45 | 61.8 | 62.0 | 62.4 | 63.7 | 64.4 | 64.7 | 64.6 | 65.1 | 65.0 |
| 90 | 65.4 | 65.6 | 64.7 | 63.9 | 63.8 | 63.1 | 62.4 | 62.2 | 62.1 |
| 135 | 62.1 | 61.9 | 62.2 | 61.9 | 61.7 | 61.4 | 61.1 | 60.7 | 60.0 |
| 180 | 59.8 | 60.0 | 60.2 | 59.6 | 58.9 | 59.5 | 59.0 | 58.3 | 58.7 |
| 225 | 60.4 | 60.5 | 60.3 | 61.3 | 61.0 | 60.6 | 60.8 | 61.1 | 61.2 |
| 270 | 61.2 | 60.9 | 60.7 | 60.0 | 60.0 | 59.7 | 58.9 | 58.9 | 58.9 |
| 315 | 59.3 | 58.9 | 58.7 | 59.7 | 59.6 | 59.8 | 60.2 | 60.8 | 61.0 |

AZ DEPTH: 995 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 59.4 | 59.5 | 59.8 | 59.6 | 59.7 | 59.6 | 59.4 | 59.4 | 59.3 |
| 45 | 59.9 | 60.8 | 61.7 | 61.5 | 62.1 | 62.5 | 62.7 | 62.6 | 62.3 |
| 90 | 62.1 | 62.4 | 62.8 | 63.9 | 64.4 | 64.7 | 64.6 | 64.7 | 65.1 |
| 135 | 65.1 | 65.5 | 64.7 | 63.9 | 63.8 | 63.3 | 60.5 | 62.2 | 62.4 |
| 180 | 62.3 | 61.8 | 62.1 | 61.9 | 61.1 | 60.5 | 60.7 | 60.5 | 59.1 |
| 225 | 59.9 | 60.2 | 60.1 | 59.5 | 59.0 | 59.5 | 59.0 | 58.4 | 59.2 |
| 270 | 60.4 | 60.3 | 60.5 | 60.8 | 60.8 | 60.7 | 61.1 | 61.2 | 61.1 |
| 315 | 61.5 | 61.2 | 60.7 | 59.8 | 59.5 | 59.4 | 59.2 | 59.2 | 58.9 |

AZ DEPTH: 997 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 61.5 | 61.5 | 62.4 | 62.7 | 62.5 | 62.5 | 62.3 | 62.7 | 63.4 |
| 45 | 64.2 | 64.7 | 64.8 | 64.6 | 63.8 | 64.1 | 64.3 | 64.8 | 63.5 |
| 90 | 63.8 | 63.3 | 62.6 | 61.5 | 61.2 | 61.6 | 61.8 | 61.4 | 61.3 |
| 135 | 60.4 | 59.1 | 59.6 | 59.0 | 58.9 | 58.3 | 58.6 | 59.9 | 59.6 |
| 180 | 59.0 | 58.7 | 59.4 | 58.7 | 58.0 | 58.5 | 59.4 | 59.9 | 60.0 |
| 225 | 59.9 | 59.8 | 60.6 | 61.1 | 60.8 | 60.8 | 61.3 | 61.6 | 61.1 |
| 270 | 59.7 | 59.8 | 59.4 | 59.2 | 59.2 | 59.0 | 59.4 | 59.5 | 59.8 |
| 315 | 59.7 | 59.6 | 59.7 | 59.9 | 60.1 | 60.5 | 60.7 | 61.0 | 61.5 |

# 5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 1000 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 59.5 | 59.0 | 58.9 | 59.3 | 59.6 | 59.8 | 60.6 | 61.0 | 60.2 |
| 45 | 58.0 | 58.9 | 58.8 | 59.5 | 60.3 | 61.2 | 61.2 | 60.6 | 60.0 |
| 90 | 60.9 | 62.1 | 62.7 | 63.2 | 63.1 | 63.0 | 62.5 | 61.5 | 60.2 |
| 135 | 63.1 | 63.6 | 62.6 | 61.8 | 61.3 | 61.2 | 60.2 | 59.2 | 60.1 |
| 180 | 59.2 | 59.8 | 60.3 | 56.5 | 53.3 | 55.5 | 54.3 | 54.4 | 50.8 |
| 225 | 54.6 | 55.3 | 55.3 | 55.7 | 56.5 | 56.0 | 57.5 | 57.6 | 55.9 |
| 270 | 56.6 | 56.6 | 57.8 | 56.5 | 57.6 | 58.9 | 59.3 | 59.9 | 59.5 |
| 315 | 60.5 | 61.5 | 61.4 | 59.2 | 59.1 | 58.2 | 58.5 | 58.7 | 59.2 |

AZ DEPTH: 1002 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 57.6 | 58.2 | 58.2 | 58.2 | 59.0 | 59.5 | 60.6 | 57.3 | 56.3 |
| 45 | 57.7 | 58.0 | 57.6 | 58.7 | 59.5 | 59.8 | 59.5 | 59.5 | 58.5 |
| 90 | 60.8 | 61.0 | 60.8 | 60.0 | 61.0 | 59.7 | 61.0 | 59.5 | 62.4 |
| 135 | 61.0 | 60.6 | 61.2 | 60.6 | 59.1 | 58.9 | 57.1 | 56.8 | 58.5 |
| 180 | 58.0 | 58.0 | 55.5 | 54.3 | 54.1 | 54.3 | 54.0 | 52.7 | 53.0 |
| 225 | 53.3 | 54.8 | 54.4 | 54.1 | 55.0 | 55.6 | 55.8 | 55.2 | 54.3 |
| 270 | 54.1 | 56.3 | 55.1 | 54.5 | 55.2 | 56.3 | 56.0 | 57.2 | 55.7 |
| 315 | 58.3 | 57.5 | 55.2 | 56.9 | 55.7 | 55.8 | 56.4 | 57.3 | 56.9 |

AZ DEPTH: 1004 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 55.0 | 57.3 | 56.9 | 56.8 | 57.8 | 58.3 | 59.5 | 59.1 | 54.6 |
| 45 | 54.6 | 56.1 | 55.9 | 57.1 | 57.8 | 58.2 | 58.4 | 57.6 | 58.1 |
| 90 | 59.1 | 59.7 | 60.2 | 60.2 | 59.2 | 58.7 | 59.2 | 60.6 | 61.3 |
| 135 | 60.5 | 60.4 | 60.8 | 59.6 | 59.0 | 59.1 | 58.2 | 56.6 | 57.6 |
| 180 | 58.7 | 57.8 | 58.2 | 55.9 | 55.3 | 55.5 | 54.6 | 57.2 | 57.9 |
| 225 | 56.6 | 55.6 | 56.3 | 56.3 | 55.9 | 55.8 | 55.9 | 55.6 | 55.3 |
| 270 | 55.4 | 55.4 | 55.4 | 55.5 | 55.9 | 55.7 | 56.2 | 55.7 | 52.8 |
| 315 | 53.3 | 54.2 | 53.5 | 54.0 | 54.9 | 53.9 | 54.4 | 55.0 | 55.0 |

AZ DEPTH: 1006 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 56.1 | 57.0 | 56.7 | 56.5 | 57.2 | 57.9 | 58.9 | 58.9 | 55.6 |
| 45 | 55.6 | 56.8 | 57.2 | 59.2 | 58.5 | 58.2 | 58.9 | 58.5 | 58.9 |
| 90 | 59.5 | 60.1 | 60.1 | 60.6 | 60.4 | 59.5 | 59.5 | 60.2 | 60.0 |
| 135 | 60.3 | 61.0 | 61.2 | 60.2 | 59.8 | 59.2 | 59.2 | 57.7 | 58.4 |
| 180 | 59.2 | 58.5 | 59.2 | 58.2 | 57.6 | 58.0 | 57.0 | 58.5 | 58.7 |
| 225 | 57.4 | 57.2 | 57.8 | 57.7 | 57.7 | 57.0 | 57.0 | 56.9 | 57.2 |
| 270 | 57.2 | 56.9 | 55.9 | 56.9 | 57.6 | 57.0 | 56.9 | 56.8 | 55.6 |
| 315 | 54.6 | 54.9 | 54.6 | 55.3 | 55.6 | 55.0 | 55.5 | 55.4 | 55.9 |

AZ DEPTH: 1010 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 57.3 | 57.2 | 57.6 | 57.9 | 58.2 | 58.2 | 58.1 | 58.7 | 58.5 |
| 45 | 58.9 | 58.5 | 59.8 | 59.8 | 59.1 | 59.9 | 59.9 | 60.1 | 60.2 |
| 90 | 60.6 | 61.5 | 62.1 | 60.8 | 61.7 | 59.9 | 59.8 | 58.9 | 59.6 |
| 135 | 59.5 | 60.6 | 60.7 | 60.1 | 59.1 | 60.2 | 58.5 | 59.4 | 59.2 |
| 180 | 58.9 | 57.9 | 58.2 | 57.9 | 58.7 | 58.1 | 58.2 | 57.9 | 57.4 |
| 225 | 56.1 | 55.7 | 55.9 | 57.2 | 56.4 | 55.7 | 54.8 | 55.6 | 55.9 |
| 270 | 56.8 | 56.6 | 57.6 | 58.0 | 58.3 | 57.5 | 57.2 | 57.1 | 55.9 |
| 315 | 56.6 | 56.6 | 56.6 | 57.0 | 57.6 | 57.2 | 57.3 | 57.6 | 58.1 |

# 5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 1012 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 57.6 | 57.9 | 59.0 | 60.0 | 60.3 | 59.7 | 59.8 | 60.8 | 61.8 |
| 45 | 59.9 | 60.1 | 59.8 | 59.1 | 60.3 | 59.2 | 59.3 | 60.2 | 59.4 |
| 90 | 60.4 | 59.8 | 58.6 | 58.9 | 57.6 | 59.4 | 58.9 | 58.0 | 57.2 |
| 135 | 57.7 | 57.6 | 57.9 | 57.6 | 58.5 | 58.2 | 57.2 | 56.2 | 55.8 |
| 180 | 54.9 | 55.9 | 56.4 | 55.8 | 54.3 | 55.1 | 55.8 | 55.9 | 56.4 |
| 225 | 57.1 | 57.4 | 57.6 | 57.5 | 57.2 | 57.2 | 55.6 | 55.4 | 56.6 |
| 270 | 55.8 | 56.3 | 56.7 | 57.2 | 57.3 | 57.9 | 58.5 | 57.0 | 56.9 |
| 315 | 57.3 | 58.5 | 58.8 | 58.2 | 58.3 | 58.5 | 55.4 | 54.7 | 56.3 |

AZ DEPTH: 1014 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 56.8 | 55.5 | 54.9 | 57.2 | 57.6 | 57.4 | 58.2 | 57.6 | 57.6 |
| 45 | 57.2 | 57.0 | 58.2 | 56.9 | 56.9 | 58.2 | 59.7 | 60.1 | 59.4 |
| 90 | 59.3 | 60.4 | 60.6 | 58.5 | 59.8 | 59.0 | 61.1 | 60.2 | 60.5 |
| 135 | 59.5 | 59.8 | 59.9 | 59.5 | 58.5 | 58.9 | 58.3 | 59.0 | 58.2 |
| 180 | 58.2 | 57.7 | 56.4 | 57.2 | 57.9 | 57.6 | 58.3 | 57.7 | 56.9 |
| 225 | 56.1 | 55.9 | 55.2 | 57.1 | 56.9 | 55.9 | 55.2 | 55.5 | 56.7 |
| 270 | 57.7 | 56.3 | 56.9 | 56.7 | 57.0 | 57.1 | 57.3 | 55.9 | 55.1 |
| 315 | 55.6 | 55.6 | 54.8 | 55.5 | 55.3 | 56.3 | 55.6 | 56.4 | 57.2 |

AZ DEPTH: 1016 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 53.4 | 54.0 | 53.3 | 54.0 | 54.3 | 54.3 | 57.5 | 57.2 | 57.0 |
| 45 | 57.2 | 56.2 | 55.9 | 56.0 | 55.9 | 56.3 | 55.7 | 58.9 | 57.9 |
| 90 | 57.7 | 58.1 | 57.7 | 56.3 | 57.2 | 57.0 | 60.1 | 59.9 | 58.8 |
| 135 | 57.6 | 56.1 | 56.5 | 57.6 | 56.4 | 54.9 | 54.2 | 54.4 | 54.1 |
| 180 | 53.2 | 52.8 | 52.0 | 53.7 | 53.7 | 54.0 | 54.0 | 54.6 | 52.5 |
| 225 | 52.5 | 53.0 | 53.5 | 52.8 | 53.6 | 53.7 | 53.0 | 53.5 | 53.0 |
| 270 | 53.0 | 52.8 | 52.0 | 53.4 | 53.7 | 52.9 | 53.3 | 53.0 | 51.4 |
| 315 | 52.5 | 52.4 | 53.7 | 51.3 | 52.2 | 52.2 | 52.0 | 52.7 | 53.2 |

AZ DEPTH: 1018 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 53.4 | 54.0 | 53.3 | 54.0 | 54.3 | 54.3 | 57.5 | 57.2 | 57.0 |
| 45 | 57.2 | 56.2 | 55.9 | 56.0 | 55.9 | 56.3 | 55.7 | 58.9 | 57.9 |
| 90 | 57.7 | 58.1 | 57.7 | 56.3 | 57.2 | 57.0 | 60.1 | 59.9 | 58.8 |
| 135 | 57.6 | 56.1 | 56.5 | 57.6 | 56.4 | 54.9 | 54.2 | 54.4 | 54.1 |
| 180 | 53.2 | 52.8 | 52.0 | 53.7 | 53.7 | 54.0 | 54.0 | 54.6 | 52.5 |
| 225 | 52.5 | 53.0 | 53.5 | 52.8 | 53.6 | 53.7 | 53.0 | 53.5 | 53.0 |
| 270 | 53.0 | 52.8 | 52.0 | 53.4 | 53.7 | 52.9 | 53.3 | 53.0 | 51.4 |
| 315 | 52.5 | 52.4 | 53.7 | 51.3 | 52.2 | 52.2 | 52.0 | 52.7 | 53.2 |

AZ DEPTH: 1020 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 52.7 | 51.3 | 52.2 | 52.6 | 52.3 | 55.6 | 56.9 | 55.2 | 54.6 |
| 45 | 56.0 | 55.7 | 54.3 | 54.7 | 54.2 | 55.3 | 55.1 | 56.0 | 55.7 |
| 90 | 56.5 | 57.6 | 56.8 | 57.7 | 57.4 | 58.7 | 59.4 | 59.1 | 58.3 |
| 135 | 57.7 | 57.0 | 57.7 | 56.9 | 57.3 | 55.8 | 54.2 | 53.9 | 53.5 |
| 180 | 52.7 | 52.1 | 52.7 | 52.4 | 51.7 | 52.7 | 53.9 | 52.7 | 51.8 |
| 225 | 51.4 | 52.0 | 53.0 | 52.3 | 52.1 | 52.4 | 51.1 | 51.7 | 52.6 |
| 270 | 52.6 | 52.5 | 52.6 | 53.7 | 53.3 | 52.6 | 53.1 | 52.1 | 51.3 |
| 315 | 52.2 | 52.0 | 52.6 | 50.1 | 51.1 | 51.1 | 50.3 | 51.4 | 51.6 |

5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 1022 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 50.5 | 51.6 | 50.2 | 51.3 | 51.9 | 53.6 | 55.6 | 56.6 | 55.2 |
| 45 | 54.4 | 55.2 | 55.3 | 55.3 | 55.1 | 55.6 | 55.4 | 55.2 | 56.6 |
| 90 | 56.8 | 57.6 | 59.2 | 59.1 | 58.7 | 58.3 | 58.3 | 58.6 | 58.6 |
| 135 | 58.3 | 57.4 | 58.2 | 58.1 | 58.7 | 57.5 | 55.5 | 54.5 | 54.0 |
| 180 | 53.0 | 53.1 | 52.4 | 52.7 | 51.2 | 50.2 | 51.9 | 52.7 | 51.5 |
| 225 | 51.1 | 51.3 | 51.9 | 51.1 | 51.4 | 51.7 | 50.7 | 51.3 | 51.1 |
| 270 | 51.7 | 51.6 | 51.7 | 53.6 | 53.5 | 54.1 | 54.2 | 53.3 | 53.2 |
| 315 | 54.0 | 53.9 | 52.4 | 51.1 | 50.9 | 51.1 | 50.5 | 50.4 | 50.3 |

AZ DEPTH: 1024 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 51.1 | 51.6 | 49.4 | 50.6 | 53.0 | 55.0 | 56.1 | 56.5 | 55.9 |
| 45 | 55.1 | 55.2 | 56.1 | 56.3 | 56.2 | 56.3 | 56.4 | 55.7 | 57.2 |
| 90 | 57.9 | 58.6 | 58.9 | 58.2 | 59.0 | 58.8 | 57.6 | 57.9 | 58.2 |
| 135 | 57.6 | 57.4 | 57.6 | 58.2 | 58.9 | 58.1 | 56.5 | 55.4 | 54.3 |
| 180 | 53.9 | 53.3 | 52.3 | 52.1 | 50.4 | 49.5 | 49.5 | 50.8 | 51.3 |
| 225 | 50.6 | 50.6 | 50.7 | 50.2 | 51.1 | 51.5 | 51.4 | 51.0 | 50.0 |
| 270 | 50.1 | 49.7 | 51.1 | 52.3 | 53.3 | 52.7 | 54.5 | 54.7 | 53.3 |
| 315 | 54.2 | 54.2 | 53.0 | 52.5 | 51.3 | 50.7 | 50.3 | 50.2 | 50.1 |

AZ DEPTH: 1028 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 49.4 | 49.7 | 46.9 | 49.4 | 52.4 | 52.9 | 53.7 | 53.2 | 54.0 |
| 45 | 54.2 | 53.3 | 57.4 | 57.5 | 56.7 | 54.5 | 55.0 | 55.9 | 54.6 |
| 90 | 55.5 | 56.6 | 55.6 | 55.6 | 55.7 | 54.9 | 54.3 | 52.8 | 55.2 |
| 135 | 54.7 | 51.6 | 52.4 | 54.7 | 57.6 | 57.9 | 58.2 | 54.0 | 52.3 |
| 180 | 51.4 | 51.1 | 49.4 | 48.0 | 45.0 | 45.8 | 47.2 | 47.2 | 46.2 |
| 225 | 46.7 | 47.0 | 47.8 | 49.0 | 48.3 | 49.6 | 49.5 | 46.2 | 45.0 |
| 270 | 45.2 | 45.6 | 47.2 | 48.4 | 46.7 | 46.0 | 49.9 | 53.7 | 54.2 |
| 315 | 51.1 | 50.9 | 50.9 | 49.8 | 43.9 | 46.7 | 47.5 | 48.3 | 49.2 |

AZ DEPTH: 1030 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 49.0 | 49.6 | 49.8 | 46.4 | 47.2 | 49.2 | 50.7 | 51.1 | 51.8 |
| 45 | 52.4 | 52.8 | 52.6 | 53.8 | 57.6 | 55.1 | 54.2 | 54.0 | 53.0 |
| 90 | 55.6 | 56.7 | 55.1 | 55.0 | 56.6 | 55.6 | 54.6 | 53.7 | 52.5 |
| 135 | 54.2 | 54.6 | 53.9 | 55.7 | 56.1 | 56.6 | 57.3 | 54.1 | 54.2 |
| 180 | 53.3 | 52.3 | 51.1 | 49.5 | 49.8 | 49.2 | 48.6 | 48.3 | 48.3 |
| 225 | 47.1 | 47.3 | 47.2 | 47.9 | 55.5 | 58.7 | 58.1 | 56.7 | 55.0 |
| 270 | 54.2 | 54.0 | 53.7 | 54.0 | 54.6 | 55.7 | 59.0 | 57.4 | 55.3 |
| 315 | 53.5 | 50.4 | 50.2 | 49.7 | 48.5 | 48.9 | 49.4 | 49.0 | 49.0 |

AZ DEPTH: 1034 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 47.2 | 47.9 | 47.8 | 47.7 | 48.1 | 48.5 | 49.1 | 51.6 | 53.3 |
| 45 | 55.3 | 57.2 | 57.7 | 58.0 | 57.7 | 57.5 | 57.6 | 57.4 | 58.9 |
| 90 | 64.0 | 65.0 | 64.2 | 61.9 | 57.5 | 56.1 | 54.3 | 53.0 | 54.1 |
| 135 | 55.0 | 55.4 | 54.7 | 54.2 | 54.1 | 54.3 | 53.5 | 52.7 | 52.3 |
| 180 | 53.8 | 50.0 | 49.6 | 47.7 | 47.1 | 48.2 | 48.5 | 48.0 | 48.1 |
| 225 | 46.2 | 46.1 | 47.2 | 48.0 | 53.9 | 57.6 | 59.2 | 59.5 | 56.6 |
| 270 | 53.3 | 53.0 | 52.6 | 54.8 | 55.7 | 56.6 | 57.2 | 57.2 | 56.2 |
| 315 | 54.5 | 53.4 | 50.7 | 49.1 | 47.9 | 47.3 | 48.1 | 47.8 | 47.2 |

# 5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 1040 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 43.2 | 43.9 | 44.1 | 44.2 | 44.5 | 43.8 | 45.1 | 46.6 | 47.8 |
| 45 | 48.9 | 54.4 | 63.0 | 59.7 | 56.1 | 52.5 | 51.4 | 55.0 | 62.8 |
| 90 | 69.6 | 71.0 | 64.7 | 58.5 | 56.2 | 53.0 | 52.5 | 50.1 | 50.2 |
| 135 | 51.7 | 51.1 | 50.8 | 48.7 | 48.2 | 48.3 | 46.5 | 45.9 | 50.3 |
| 180 | 61.9 | 49.9 | 42.7 | 42.5 | 41.0 | 40.4 | 40.7 | 40.5 | 41.4 |
| 225 | 42.1 | 41.9 | 42.3 | 45.9 | 51.4 | 56.4 | 56.3 | 53.6 | 51.7 |
| 270 | 48.4 | 47.5 | 49.3 | 49.8 | 53.7 | 55.6 | 57.1 | 59.5 | 57.1 |
| 315 | 53.7 | 49.1 | 45.2 | 43.2 | 44.2 | 46.8 | 48.5 | 46.6 | 44.5 |

AZ DEPTH: 1042 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 42.1 | 42.3 | 43.9 | 43.8 | 43.4 | 42.6 | 41.7 | 43.3 | 45.1 |
| 45 | 45.7 | 54.6 | 64.4 | 60.7 | 56.3 | 48.7 | 50.2 | 59.1 | 64.1 |
| 90 | 69.0 | 70.1 | 64.4 | 56.2 | 54.6 | 50.1 | 49.0 | 48.6 | 49.3 |
| 135 | 48.6 | 48.6 | 48.2 | 46.1 | 45.7 | 45.2 | 43.9 | 45.2 | 45.7 |
| 180 | 46.5 | 51.8 | 43.0 | 42.3 | 40.6 | 39.4 | 39.5 | 39.3 | 39.3 |
| 225 | 40.0 | 40.0 | 40.5 | 43.9 | 49.8 | 53.4 | 53.9 | 51.6 | 49.8 |
| 270 | 47.2 | 47.2 | 47.5 | 48.3 | 50.5 | 53.1 | 53.8 | 57.1 | 55.2 |
| 315 | 50.1 | 46.0 | 41.4 | 41.0 | 41.9 | 46.4 | 48.4 | 48.1 | 44.1 |

AZ DEPTH: 1044 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 38.9 | 39.9 | 41.6 | 41.6 | 41.2 | 39.9 | 40.3 | 41.6 | 42.4 |
| 45 | 44.4 | 51.4 | 62.1 | 60.8 | 54.7 | 45.4 | 46.0 | 51.1 | 62.1 |
| 90 | 67.2 | 63.4 | 56.9 | 53.8 | 50.1 | 47.3 | 47.0 | 47.4 | 48.5 |
| 135 | 49.2 | 48.6 | 48.0 | 45.9 | 45.3 | 44.5 | 43.6 | 43.9 | 44.5 |
| 180 | 44.5 | 42.4 | 42.8 | 40.6 | 40.1 | 39.2 | 38.4 | 36.6 | 38.2 |
| 225 | 39.6 | 39.9 | 41.1 | 43.5 | 48.6 | 50.6 | 50.6 | 49.6 | 48.2 |
| 270 | 48.1 | 48.1 | 48.3 | 49.4 | 52.8 | 54.2 | 54.3 | 54.3 | 57.9 |
| 315 | 59.9 | 58.9 | 56.8 | 56.1 | 55.0 | 48.2 | 47.5 | 45.2 | 41.0 |

AZ DEPTH: 1046 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 36.4 | 38.1 | 39.2 | 39.3 | 41.4 | 51.1 | 61.3 | 61.6 | 60.6 |
| 45 | 62.2 | 62.1 | 64.0 | 59.5 | 49.4 | 42.8 | 42.9 | 47.5 | 56.1 |
| 90 | 62.8 | 56.7 | 52.5 | 50.2 | 46.3 | 45.2 | 45.6 | 47.3 | 47.8 |
| 135 | 48.5 | 47.9 | 47.0 | 45.9 | 44.9 | 43.6 | 43.0 | 41.5 | 41.9 |
| 180 | 41.0 | 39.7 | 38.9 | 38.0 | 37.7 | 36.5 | 34.8 | 33.4 | 33.7 |
| 225 | 37.2 | 38.2 | 41.4 | 42.0 | 45.1 | 49.1 | 46.8 | 46.3 | 46.4 |
| 270 | 48.5 | 48.7 | 49.2 | 52.8 | 54.3 | 52.8 | 71.5 | 65.3 | 60.2 |
| 315 | 60.0 | 58.4 | 56.5 | 56.6 | 54.6 | 48.7 | 45.5 | 43.9 | 36.7 |

AZ DEPTH: 1048 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 33.8 | 35.4 | 36.6 | 37.0 | 36.7 | 59.9 | 59.6 | 61.2 | 60.0 |
| 45 | 63.1 | 61.7 | 62.1 | 59.0 | 42.6 | 40.6 | 41.3 | 43.2 | 52.6 |
| 90 | 62.1 | 56.9 | 51.1 | 50.1 | 48.1 | 44.9 | 45.4 | 46.2 | 45.9 |
| 135 | 45.8 | 46.2 | 44.5 | 43.6 | 42.8 | 41.9 | 40.2 | 39.8 | 40.0 |
| 180 | 38.9 | 37.4 | 36.4 | 35.9 | 35.4 | 34.0 | 32.2 | 31.0 | 30.1 |
| 225 | 33.7 | 36.7 | 39.4 | 40.3 | 42.5 | 44.1 | 44.8 | 44.2 | 44.7 |
| 270 | 46.8 | 47.6 | 48.0 | 51.2 | 53.0 | 53.3 | 52.4 | 54.6 | 57.5 |
| 315 | 59.2 | 59.3 | 56.6 | 43.0 | 48.7 | 43.4 | 40.9 | 35.3 | 34.1 |

5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 1050 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 30.6 | 31.2 | 32.5 | 32.1 | 34.4 | 34.5 | 56.6 | 55.8 | 55.7 |
| 45 | 58.0 | 59.7 | 56.0 | 44.9 | 38.0 | 37.3 | 38.4 | 39.3 | 41.1 |
| 90 | 43.2 | 46.8 | 49.6 | 52.8 | 50.1 | 49.5 | 49.6 | 44.8 | 45.5 |
| 135 | 44.3 | 43.9 | 42.8 | 41.5 | 40.0 | 39.1 | 37.4 | 37.7 | 38.3 |
| 180 | 38.4 | 36.7 | 35.6 | 34.9 | 34.0 | 33.5 | 33.0 | 31.4 | 30.1 |
| 225 | 28.5 | 28.8 | 33.2 | 36.5 | 38.9 | 42.4 | 43.6 | 42.6 | 41.9 |
| 270 | 43.6 | 45.5 | 46.8 | 47.3 | 49.9 | 50.6 | 51.6 | 51.4 | 52.4 |
| 315 | 55.8 | 53.7 | 48.8 | 43.1 | 41.7 | 41.1 | 39.4 | 31.9 | 30.9 |

AZ DEPTH: 1052 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 71.7 | 71.3 | 71.9 | 72.4 | 72.8 | 72.9 | 72.7 | 72.9 | 73.3 |
| 45 | 73.5 | 73.1 | 74.1 | 74.1 | 73.5 | 75.1 | 77.1 | 79.1 | 78.2 |
| 90 | 77.2 | 76.8 | 76.2 | 76.7 | 76.8 | 76.5 | 76.1 | 73.5 | 72.9 |
| 135 | 72.3 | 72.3 | 71.6 | 71.2 | 71.7 | 72.2 | 71.9 | 72.4 | 72.0 |
| 180 | 70.5 | 71.5 | 71.9 | 70.9 | 69.9 | 69.9 | 69.0 | 69.5 | 69.1 |
| 225 | 68.2 | 68.1 | 68.0 | 67.6 | 66.9 | 67.4 | 67.9 | 69.1 | 69.2 |
| 270 | 70.6 | 70.0 | 72.2 | 71.9 | 71.5 | 70.8 | 70.6 | 70.5 | 71.1 |
| 315 | 70.7 | 71.2 | 72.3 | 72.3 | 71.8 | 71.6 | 71.5 | 71.6 | 71.7 |

AZ DEPTH: 1054 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 71.9 | 71.3 | 71.6 | 71.6 | 72.3 | 72.8 | 72.8 | 72.7 | 72.6 |
| 45 | 73.0 | 73.1 | 73.9 | 73.8 | 75.1 | 77.0 | 79.1 | 77.9 | 76.7 |
| 90 | 77.2 | 75.3 | 75.1 | 75.8 | 76.6 | 75.6 | 73.7 | 73.8 | 73.5 |
| 135 | 72.3 | 72.2 | 71.9 | 70.8 | 71.5 | 71.2 | 72.2 | 72.2 | 70.3 |
| 180 | 69.9 | 71.8 | 71.6 | 70.9 | 69.9 | 69.9 | 69.3 | 68.5 | 68.3 |
| 225 | 68.3 | 67.3 | 67.3 | 67.0 | 65.5 | 65.3 | 66.1 | 66.1 | 66.1 |
| 270 | 66.1 | 68.9 | 67.5 | 69.9 | 68.6 | 69.3 | 69.1 | 68.6 | 68.7 |
| 315 | 69.0 | 69.7 | 70.5 | 72.5 | 71.9 | 71.6 | 70.8 | 71.3 | 71.8 |

AZ DEPTH: 1056 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 71.6 | 71.2 | 71.7 | 72.5 | 73.2 | 72.9 | 72.6 | 72.0 | 71.3 |
| 45 | 72.2 | 72.2 | 72.3 | 72.6 | 73.0 | 76.6 | 78.4 | 78.3 | 76.5 |
| 90 | 75.4 | 74.5 | 74.6 | 75.7 | 74.2 | 73.6 | 72.7 | 71.3 | 71.3 |
| 135 | 70.9 | 70.7 | 69.6 | 69.0 | 69.7 | 69.9 | 70.5 | 71.8 | 71.0 |
| 180 | 68.7 | 67.0 | 70.3 | 68.6 | 67.9 | 67.9 | 66.5 | 68.6 | 68.2 |
| 225 | 67.4 | 66.4 | 65.8 | 65.5 | 63.6 | 64.6 | 66.0 | 65.8 | 65.8 |
| 270 | 66.8 | 66.7 | 65.7 | 66.9 | 66.1 | 68.1 | 67.7 | 68.1 | 69.3 |
| 315 | 68.0 | 68.3 | 69.2 | 71.2 | 70.1 | 69.9 | 69.2 | 69.4 | 71.0 |

AZ DEPTH: 1058 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 71.2 | 70.5 | 70.6 | 70.2 | 71.9 | 71.4 | 73.0 | 73.5 | 71.5 |
| 45 | 72.0 | 71.4 | 71.0 | 74.2 | 76.8 | 79.0 | 78.8 | 77.1 | 75.5 |
| 90 | 75.5 | 73.9 | 74.5 | 75.8 | 77.4 | 77.0 | 77.2 | 77.4 | 77.4 |
| 135 | 78.8 | 79.2 | 80.7 | 79.4 | 79.8 | 78.0 | 76.3 | 75.8 | 75.4 |
| 180 | 75.6 | 74.6 | 74.5 | 74.2 | 74.0 | 74.0 | 74.0 | 74.6 | 74.2 |
| 225 | 73.5 | 73.0 | 71.8 | 71.2 | 71.2 | 70.6 | 70.4 | 70.9 | 70.9 |
| 270 | 71.8 | 73.0 | 72.9 | 74.0 | 74.3 | 74.3 | 74.2 | 72.9 | 73.0 |
| 315 | 69.6 | 72.2 | 72.0 | 71.1 | 69.5 | 68.6 | 70.9 | 72.2 | 71.1 |

5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 1060 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 72.5 | 72.5 | 73.7 | 73.5 | 74.3 | 74.2 | 73.9 | 74.4 | 74.5 |
| 45 | 74.7 | 74.5 | 75.1 | 75.7 | 75.8 | 77.7 | 79.2 | 78.5 | 77.3 |
| 90 | 77.5 | 76.5 | 77.6 | 77.6 | 76.4 | 76.1 | 77.1 | 78.0 | 78.3 |
| 135 | 78.7 | 79.1 | 79.7 | 80.6 | 80.2 | 80.3 | 78.3 | 76.2 | 75.6 |
| 180 | 75.7 | 74.5 | 74.5 | 74.2 | 74.2 | 74.8 | 75.1 | 74.2 | 73.8 |
| 225 | 73.6 | 73.8 | 73.2 | 70.9 | 71.0 | 70.4 | 69.7 | 70.5 | 70.8 |
| 270 | 70.6 | 72.0 | 73.8 | 74.2 | 74.0 | 71.2 | 71.5 | 71.3 | 70.7 |
| 315 | 72.6 | 70.5 | 71.4 | 71.6 | 71.0 | 70.1 | 70.8 | 72.2 | 72.5 |

AZ DEPTH: 1062 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 75.1 | 74.9 | 74.8 | 74.9 | 74.2 | 73.0 | 73.5 | 73.7 | 73.7 |
| 45 | 73.8 | 74.9 | 76.0 | 77.0 | 77.8 | 79.1 | 80.1 | 79.4 | 78.1 |
| 90 | 77.5 | 76.1 | 77.8 | 79.0 | 78.7 | 76.7 | 76.1 | 77.4 | 78.3 |
| 135 | 78.4 | 79.4 | 81.0 | 80.4 | 80.3 | 78.8 | 78.1 | 76.1 | 75.9 |
| 180 | 76.1 | 74.8 | 74.1 | 74.6 | 74.2 | 74.5 | 75.0 | 74.8 | 73.6 |
| 225 | 73.5 | 71.3 | 70.9 | 71.1 | 69.4 | 69.9 | 70.4 | 70.6 | 70.7 |
| 270 | 71.9 | 72.4 | 73.4 | 73.9 | 74.4 | 73.2 | 72.1 | 71.7 | 70.0 |
| 315 | 73.6 | 74.0 | 73.7 | 73.2 | 71.9 | 73.3 | 74.3 | 74.8 | 75.3 |

AZ DEPTH: 1064 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 74.9 | 74.8 | 74.4 | 74.7 | 71.2 | 72.1 | 74.0 | 74.8 | 76.1 |
| 45 | 76.2 | 76.8 | 77.4 | 76.6 | 78.9 | 79.7 | 78.0 | 77.3 | 76.5 |
| 90 | 76.5 | 73.6 | 78.1 | 79.4 | 79.0 | 75.8 | 76.6 | 76.7 | 77.4 |
| 135 | 80.0 | 81.0 | 80.4 | 79.6 | 78.4 | 77.1 | 75.6 | 74.8 | 76.0 |
| 180 | 75.7 | 73.0 | 74.6 | 74.7 | 74.3 | 75.0 | 75.1 | 73.9 | 72.5 |
| 225 | 70.0 | 70.6 | 67.6 | 69.0 | 69.6 | 71.1 | 70.7 | 70.3 | 71.0 |
| 270 | 71.5 | 71.7 | 72.6 | 74.3 | 73.2 | 71.6 | 70.6 | 69.1 | 71.6 |
| 315 | 72.9 | 73.1 | 72.0 | 71.0 | 72.6 | 74.4 | 74.4 | 75.4 | 74.2 |

AZ DEPTH: 1066 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 74.2 | 74.2 | 74.5 | 74.1 | 73.2 | 68.6 | 70.3 | 71.7 | 73.5 |
| 45 | 74.2 | 75.6 | 75.5 | 76.1 | 77.0 | 76.4 | 77.9 | 78.2 | 76.8 |
| 90 | 74.6 | 73.3 | 71.7 | 78.4 | 79.9 | 78.2 | 75.3 | 75.8 | 75.3 |
| 135 | 76.4 | 77.6 | 80.1 | 79.8 | 80.1 | 79.2 | 78.5 | 74.7 | 74.4 |
| 180 | 75.6 | 75.9 | 74.2 | 74.6 | 75.1 | 73.5 | 74.9 | 74.8 | 74.0 |
| 225 | 73.9 | 70.9 | 70.7 | 70.2 | 67.6 | 69.2 | 70.0 | 71.7 | 70.6 |
| 270 | 72.5 | 71.6 | 71.1 | 71.5 | 72.7 | 72.9 | 71.6 | 70.1 | 69.3 |
| 315 | 69.4 | 70.7 | 71.6 | 73.8 | 69.7 | 70.4 | 71.6 | 73.6 | 74.1 |

AZ DEPTH: 1068 ft TILT: 90 degrees

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 74.5 | 74.1 | 73.8 | 73.8 | 71.6 | 71.6 | 70.2 | 72.5 | 73.5 |
| 45 | 74.5 | 76.0 | 76.0 | 75.7 | 76.5 | 75.8 | 77.3 | 78.4 | 76.9 |
| 90 | 76.3 | 73.9 | 75.1 | 80.0 | 79.9 | 78.1 | 76.3 | 76.7 | 77.2 |
| 135 | 78.4 | 78.7 | 80.5 | 80.5 | 81.7 | 79.0 | 78.4 | 77.5 | 75.6 |
| 180 | 77.4 | 77.1 | 77.8 | 76.4 | 75.5 | 73.2 | 75.2 | 75.1 | 75.1 |
| 225 | 75.1 | 75.5 | 76.8 | 73.6 | 73.2 | 73.0 | 73.5 | 73.7 | 74.1 |
| 270 | 75.8 | 75.5 | 75.1 | 76.0 | 74.6 | 74.5 | 74.8 | 72.8 | 74.3 |
| 315 | 73.0 | 71.2 | 73.2 | 75.3 | 69.5 | 70.6 | 73.2 | 73.0 | 74.5 |

# 5 DEGREE RADII REPORT

Radii in feet

AZ DEPTH: 1070 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 75.5 | 74.5 | 76.1 | 74.8 | 74.8 | 75.1 | 74.5 | 76.1 | 76.2 |
| 45 | 76.5 | 76.7 | 76.9 | 76.2 | 77.8 | 79.9 | 78.3 | 77.7 | 77.2 |
| 90 | 79.7 | 80.7 | 79.0 | 78.5 | 79.2 | 79.5 | 80.9 | 80.7 | 83.6 |
| 135 | 82.3 | 82.4 | 81.0 | 79.4 | 78.9 | 77.8 | 77.9 | 77.4 | 80.1 |
| 180 | 79.1 | 77.0 | 75.5 | 74.5 | 75.5 | 76.1 | 75.8 | 76.4 | 76.8 |
| 225 | 75.1 | 74.1 | 74.9 | 75.1 | 74.5 | 75.1 | 76.6 | 77.5 | 77.0 |
| 270 | 76.8 | 78.0 | 76.8 | 76.6 | 74.8 | 75.6 | 76.6 | 77.2 | 78.1 |
| 315 | 75.9 | 75.0 | 73.2 | 74.8 | 74.7 | 74.7 | 74.9 | 75.0 | 75.5 |

AZ DEPTH: 1075 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 76.5 | 77.7 | 77.1 | 75.6 | 71.5 | 73.1 | 75.5 | 77.7 | 77.1 |
| 45 | 76.8 | 77.2 | 77.4 | 76.5 | 77.7 | 78.4 | 77.8 | 78.1 | 79.5 |
| 90 | 80.2 | 81.1 | 82.8 | 82.4 | 81.7 | 80.7 | 79.4 | 80.1 | 78.9 |
| 135 | 79.7 | 79.2 | 78.9 | 78.2 | 76.5 | 72.1 | 71.3 | 75.4 | 75.8 |
| 180 | 76.4 | 75.0 | 71.6 | 68.8 | 74.4 | 73.2 | 67.5 | 70.0 | 74.3 |
| 225 | 75.8 | 74.5 | 72.2 | 72.5 | 73.5 | 71.9 | 73.8 | 72.2 | 73.9 |
| 270 | 73.8 | 75.9 | 75.5 | 73.0 | 69.1 | 72.1 | 71.6 | 72.2 | 71.6 |
| 315 | 70.8 | 70.2 | 73.3 | 75.9 | 76.1 | 75.8 | 75.5 | 78.1 | 77.1 |

AZ DEPTH: 1080 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 71.9 | 70.0 | 70.6 | 71.6 | 73.4 | 71.7 | 73.1 | 73.2 | 73.1 |
| 45 | 73.3 | 74.2 | 73.1 | 66.7 | 69.6 | 68.0 | 71.7 | 70.9 | 70.6 |
| 90 | 71.3 | 71.6 | 71.7 | 72.7 | 72.6 | 72.5 | 74.2 | 74.1 | 73.8 |
| 135 | 75.6 | 75.8 | 74.5 | 75.5 | 74.6 | 73.3 | 74.1 | 75.6 | 77.8 |
| 180 | 79.7 | 78.6 | 75.5 | 73.5 | 73.7 | 73.1 | 73.7 | 71.9 | 73.4 |
| 225 | 72.9 | 72.2 | 72.0 | 73.5 | 71.6 | 71.8 | 73.4 | 72.2 | 72.5 |
| 270 | 72.9 | 72.3 | 72.9 | 72.7 | 70.9 | 72.2 | 73.6 | 71.9 | 71.1 |
| 315 | 69.2 | 68.6 | 70.9 | 72.2 | 75.9 | 76.7 | 71.9 | 69.0 | 71.7 |

AZ DEPTH: 1085 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 71.4 | 69.8 | 69.7 | 67.1 | 67.1 | 68.3 | 67.6 | 67.4 | 67.4 |
| 45 | 66.0 | 65.1 | 65.4 | 65.4 | 63.7 | 64.5 | 64.6 | 64.7 | 64.5 |
| 90 | 65.2 | 67.2 | 68.5 | 67.0 | 69.3 | 68.7 | 69.0 | 68.7 | 69.2 |
| 135 | 70.4 | 74.3 | 73.4 | 71.6 | 71.6 | 68.6 | 69.0 | 69.0 | 69.9 |
| 180 | 68.9 | 67.1 | 66.2 | 69.1 | 70.2 | 68.0 | 67.3 | 68.3 | 67.6 |
| 225 | 67.2 | 67.7 | 66.8 | 65.8 | 66.0 | 65.7 | 66.7 | 66.7 | 66.4 |
| 270 | 64.6 | 64.4 | 63.4 | 63.1 | 62.4 | 62.1 | 61.2 | 61.2 | 62.5 |
| 315 | 62.3 | 62.1 | 62.6 | 63.6 | 63.1 | 68.1 | 69.3 | 71.7 | 70.5 |

AZ DEPTH: 1090 ft TILT: 90 degrees

| AZ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 61.0 | 61.2 | 60.7 | 60.8 | 60.8 | 60.2 | 59.8 | 58.7 | 60.0 |
| 45 | 60.6 | 59.4 | 56.9 | 55.4 | 56.6 | 56.1 | 56.9 | 56.0 | 50.6 |
| 90 | 50.9 | 56.3 | 57.9 | 59.7 | 59.8 | 60.4 | 61.6 | 61.4 | 61.3 |
| 135 | 64.1 | 64.1 | 64.3 | 63.4 | 63.1 | 62.8 | 63.5 | 63.8 | 64.1 |
| 180 | 61.6 | 60.0 | 59.5 | 58.8 | 60.6 | 62.1 | 62.7 | 63.4 | 65.4 |
| 225 | 65.2 | 65.1 | 65.7 | 65.7 | 64.6 | 65.4 | 64.8 | 62.1 | 59.2 |
| 270 | 58.7 | 57.6 | 56.6 | 55.8 | 54.6 | 55.4 | 55.1 | 50.3 | 49.5 |
| 315 | 51.6 | 53.8 | 55.6 | 54.8 | 56.5 | 57.9 | 58.2 | 58.9 | 60.1 |

5 DEGREE RADII REPORT

Radii in feet

| AZ | DEPTH: 1092 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 57.7 | 57.9 | 57.9 | 57.4 | 57.9 | 58.2 | 57.8 | 57.4 | 57.2 |
| 45 | 56.3 | 56.9 | 56.3 | 54.1 | 51.6 | 52.7 | 53.7 | 53.3 | 49.7 |
| 90 | 44.2 | 48.8 | 53.7 | 56.2 | 58.1 | 58.1 | 58.2 | 58.5 | 59.2 |
| 135 | 59.8 | 62.3 | 62.4 | 61.0 | 60.7 | 60.1 | 60.5 | 60.3 | 58.2 |
| 180 | 60.5 | 58.2 | 57.1 | 57.1 | 58.5 | 58.8 | 60.1 | 60.4 | 60.8 |
| 225 | 63.1 | 63.3 | 63.5 | 65.2 | 64.3 | 64.4 | 62.8 | 59.8 | 57.8 |
| 270 | 56.5 | 55.5 | 54.6 | 53.7 | 51.7 | 51.0 | 50.8 | 48.4 | 46.5 |
| 315 | 47.0 | 48.1 | 51.7 | 52.0 | 52.0 | 55.0 | 55.6 | 56.6 | 56.9 |

| AZ | DEPTH: 1094 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 54.8 | 54.1 | 54.3 | 53.7 | 55.0 | 54.4 | 55.3 | 54.1 | 53.7 |
| 45 | 51.7 | 49.5 | 48.5 | 49.5 | 49.4 | 49.0 | 45.9 | 39.9 | 39.9 |
| 90 | 43.9 | 46.9 | 51.0 | 54.9 | 56.5 | 55.9 | 56.1 | 56.8 | 58.2 |
| 135 | 59.2 | 58.2 | 58.5 | 56.6 | 57.2 | 58.3 | 56.9 | 53.7 | 54.6 |
| 180 | 56.0 | 55.5 | 55.6 | 56.0 | 56.1 | 58.2 | 58.2 | 59.9 | 59.7 |
| 225 | 60.1 | 62.5 | 62.2 | 61.8 | 61.6 | 59.2 | 58.4 | 55.9 | 54.2 |
| 270 | 53.7 | 50.4 | 48.2 | 45.9 | 45.0 | 43.6 | 43.3 | 43.3 | 44.5 |
| 315 | 44.6 | 46.9 | 49.1 | 49.6 | 49.8 | 52.9 | 53.5 | 53.5 | 54.8 |

| AZ | DEPTH: 1096 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 51.6 | 51.7 | 52.1 | 52.0 | 51.9 | 51.6 | 51.7 | 50.7 | 48.5 |
| 45 | 47.4 | 46.2 | 46.1 | 46.5 | 46.7 | 46.3 | 37.7 | 34.5 | 36.0 |
| 90 | 35.5 | 37.4 | 38.4 | 32.4 | 37.2 | 53.9 | 54.0 | 53.6 | 50.9 |
| 135 | 54.7 | 56.8 | 55.5 | 53.2 | 54.6 | 55.3 | 55.1 | 52.8 | 52.4 |
| 180 | 54.2 | 53.8 | 53.3 | 53.3 | 53.9 | 54.7 | 55.5 | 57.2 | 57.9 |
| 225 | 58.2 | 58.3 | 58.8 | 59.2 | 57.7 | 57.3 | 56.9 | 53.5 | 52.7 |
| 270 | 52.0 | 47.5 | 45.5 | 42.1 | 38.6 | 37.6 | 39.0 | 39.2 | 41.4 |
| 315 | 41.3 | 42.8 | 44.6 | 43.8 | 37.2 | 36.4 | 48.5 | 50.7 | 51.6 |

| AZ | DEPTH: 1098 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 48.0 | 48.9 | 49.2 | 48.9 | 50.0 | 49.8 | 48.2 | 48.4 | 46.3 |
| 45 | 49.0 | 44.0 | 40.8 | 32.6 | 37.3 | 33.8 | 33.0 | 33.3 | 33.6 |
| 90 | 33.9 | 34.8 | 35.5 | 35.8 | 36.8 | 41.9 | 46.8 | 49.6 | 51.1 |
| 135 | 51.4 | 52.0 | 52.0 | 52.0 | 52.4 | 52.4 | 51.3 | 51.6 | 51.5 |
| 180 | 52.7 | 49.4 | 50.9 | 50.7 | 51.0 | 52.0 | 51.5 | 53.0 | 53.6 |
| 225 | 54.6 | 54.0 | 57.1 | 56.2 | 55.9 | 55.4 | 47.9 | 44.5 | 46.9 |
| 270 | 50.3 | 39.0 | 37.4 | 36.0 | 36.0 | 34.3 | 33.5 | 34.9 | 33.8 |
| 315 | 33.0 | 36.7 | 36.7 | 35.7 | 35.1 | 33.2 | 34.1 | 35.6 | 48.1 |

| AZ | DEPTH: 1100 ft | | | | TILT: 90 degrees | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 19.5 | 21.9 | 18.5 | 19.2 | 20.8 | 25.2 | 27.3 | 27.0 | 26.0 |
| 45 | 24.9 | 24.4 | 23.9 | 24.5 | 24.4 | 24.9 | 25.3 | 24.9 | 27.6 |
| 90 | 28.3 | 29.9 | 33.5 | 21.9 | 29.2 | 28.7 | 28.5 | 21.4 | 22.3 |
| 135 | 31.9 | 37.5 | 32.8 | 29.5 | 25.6 | 27.8 | 29.6 | 30.1 | 32.3 |
| 180 | 36.2 | 22.0 | 34.4 | 34.8 | 49.4 | 48.0 | 48.1 | 50.3 | 52.7 |
| 225 | 51.1 | 51.2 | 54.4 | 54.4 | 55.0 | 53.9 | 54.1 | 42.2 | 40.0 |
| 270 | 39.0 | 39.3 | 35.6 | 32.5 | 29.9 | 30.1 | 28.8 | 28.6 | 28.3 |
| 315 | 28.6 | 27.6 | 24.3 | 24.0 | 24.4 | 23.6 | 20.3 | 20.1 | 19.3 |

5 DEGREE RADII REPORT

Radii in feet

| AZ | DEPTH: 1101 ft | | | TILT: 90 degrees | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 16.2 | 16.2 | 16.2 | 16.2 | 16.0 | 16.6 | 16.6 | 16.6 | 16.6 |
| 45 | 18.5 | 18.9 | 17.9 | 17.9 | 17.9 | 19.1 | 20.2 | 20.0 | 20.3 |
| 90 | 19.5 | 12.1 | 13.0 | 13.2 | 14.4 | 15.4 | 17.2 | 17.6 | 18.6 |
| 135 | 19.2 | 20.5 | 20.5 | 22.1 | 22.1 | 22.1 | 23.1 | 26.3 | 27.3 |
| 180 | 28.7 | 31.5 | 30.8 | 48.2 | 48.2 | 30.9 | 30.9 | 26.8 | 22.2 |
| 225 | 21.0 | 20.7 | 37.1 | 33.8 | 38.0 | 25.3 | 24.7 | 25.8 | 22.8 |
| 270 | 20.2 | 23.0 | 18.7 | 17.6 | 15.9 | 16.4 | 16.6 | 16.2 | 17.2 |
| 315 | 15.2 | 15.3 | 16.2 | 16.2 | 16.2 | 16.2 | 16.2 | 16.2 | 16.2 |

| AZ | DEPTH: 1102 ft | | | TILT: 90 degrees | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 2.5 | 2.5 | 2.5 | 2.2 | 2.4 | 3.0 | 3.0 | 3.0 | 3.0 |
| 45 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 90 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.3 |
| 135 | 3.2 | 3.4 | 3.4 | 3.3 | 3.2 | 2.8 | 2.7 | 2.8 | 2.8 |
| 180 | 2.7 | 2.7 | 2.7 | 3.1 | 3.5 | 3.6 | 3.7 | 3.7 | 3.7 |
| 225 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.4 | 3.6 | 3.3 |
| 270 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 315 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |

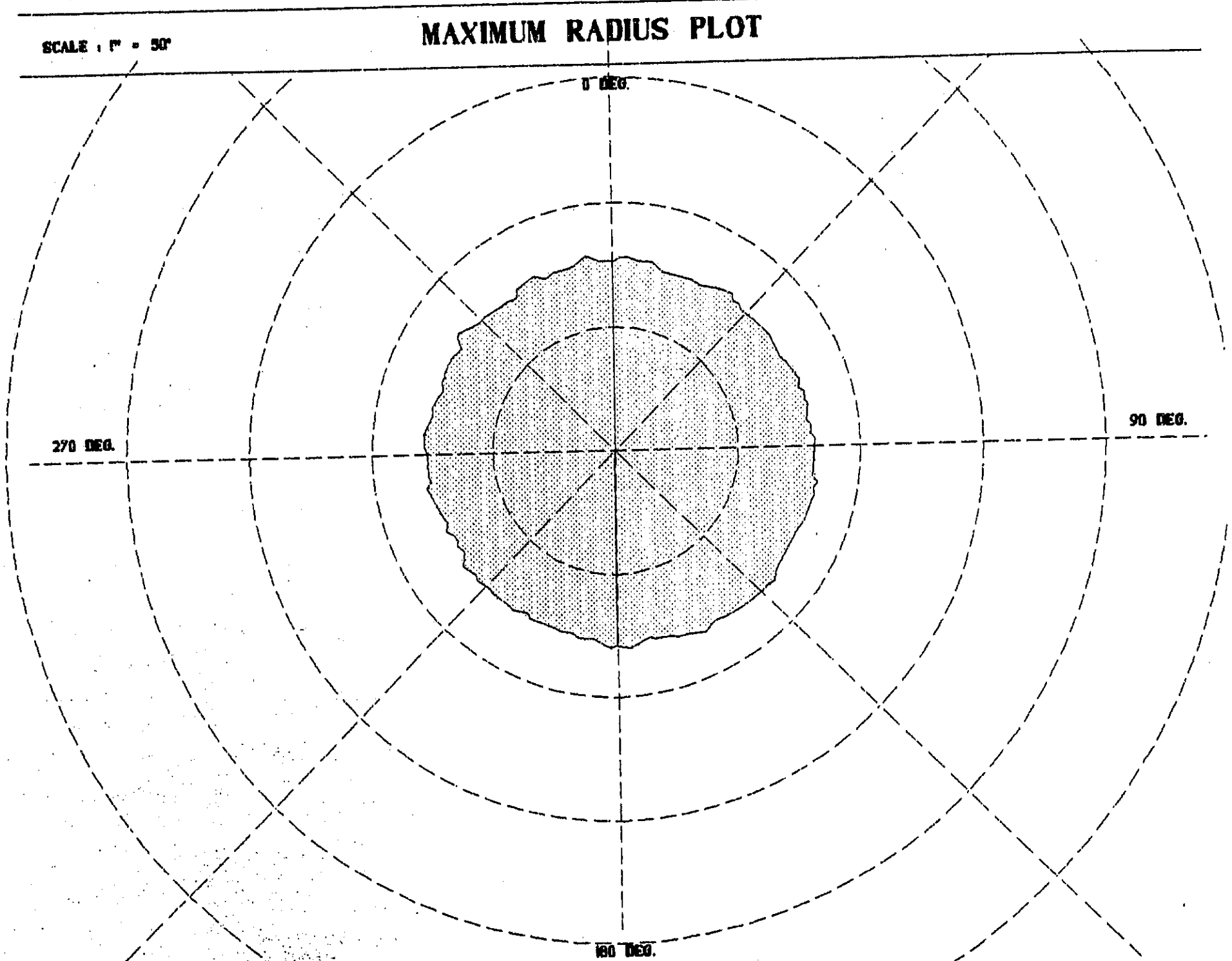
MAXIMUM HORIZONTAL RADII

| AZM deg | RADIUS ft | DEPTH ft |
|---|---|---|
| 0 | 76.5 | 1075 |
| 2 | 78.2 | 1075 |
| 4 | 78.2 | 1075 |
| 6 | 77.2 | 1075 |
| 8 | 76.9 | 1075 |
| 10 | 77.1 | 1075 |
| 12 | 77.7 | 1075 |
| 14 | 77.1 | 1075 |
| 16 | 74.9 | 1062 |
| 18 | 74.7 | 1070 |
| 20 | 74.8 | 1070 |
| 22 | 75.1 | 1070 |
| 24 | 75.2 | 1070 |
| 26 | 74.9 | 1070 |
| 28 | 74.5 | 1070 |
| 30 | 75.5 | 1075 |
| 32 | 76.0 | 1075 |
| 34 | 77.1 | 1075 |
| 36 | 78.2 | 1075 |
| 38 | 78.0 | 1075 |
| 40 | 77.1 | 1075 |
| 42 | 77.1 | 1075 |
| 44 | 76.8 | 1075 |
| 46 | 76.9 | 1075 |
| 48 | 77.1 | 1070 |
| 50 | 77.2 | 1075 |
| 52 | 77.3 | 1064 |
| 54 | 77.3 | 1075 |
| 56 | 77.6 | 1064 |
| 58 | 77.1 | 1064 |
| 60 | 77.0 | 1062 |
| 62 | 77.4 | 1064 |
| 64 | 78.1 | 1064 |
| 66 | 79.7 | 1064 |
| 68 | 79.7 | 1064 |
| 70 | 79.9 | 1070 |
| 72 | 79.2 | 1058 |
| 74 | 80.2 | 1062 |
| 76 | 80.0 | 1062 |
| 78 | 79.7 | 1062 |
| 80 | 79.4 | 1062 |
| 82 | 79.1 | 1052 |
| 84 | 79.7 | 1075 |
| 86 | 79.4 | 1075 |
| 88 | 80.3 | 1075 |
| 90 | 80.2 | 1075 |
| 92 | 81.0 | 1070 |
| 94 | 81.4 | 1075 |
| 96 | 80.9 | 1075 |
| 98 | 81.5 | 1075 |
| 100 | 82.8 | 1075 |
| 102 | 82.0 | 1075 |
| 104 | 82.6 | 1075 |
| 106 | 82.3 | 1075 |
| 108 | 82.0 | 1075 |
| 110 | 81.7 | 1075 |
| 112 | 81.4 | 1075 |
| 114 | 80.7 | 1075 |
| 116 | 80.6 | 1075 |
| 118 | 80.5 | 1070 |
| 120 | 80.9 | 1070 |
| 122 | 80.9 | 1070 |
| 124 | 80.6 | 1070 |
| 126 | 80.9 | 1070 |
| 128 | 81.7 | 1070 |
| 130 | 83.6 | 1070 |
| 132 | 83.3 | 1070 |
| 134 | 82.7 | 1070 |
| 136 | 82.0 | 1070 |
| 138 | 82.7 | 1070 |
| 140 | 82.4 | 1070 |
| 142 | 82.0 | 1070 |
| 144 | 81.7 | 1070 |
| 146 | 81.3 | 1068 |
| 148 | 81.3 | 1066 |
| 150 | 80.6 | 1060 |
| 152 | 80.4 | 1060 |
| 154 | 82.0 | 1068 |
| 156 | 81.3 | 1068 |
| 158 | 80.1 | 1060 |
| 160 | 80.3 | 1060 |
| 162 | 80.0 | 1060 |
| 164 | 78.8 | 1060 |
| 166 | 78.5 | 1068 |
| 168 | 78.1 | 1070 |
| 170 | 77.5 | 1068 |
| 172 | 77.7 | 1070 |
| 174 | 79.7 | 1070 |
| 176 | 80.5 | 1070 |
| 178 | 79.8 | 1070 |

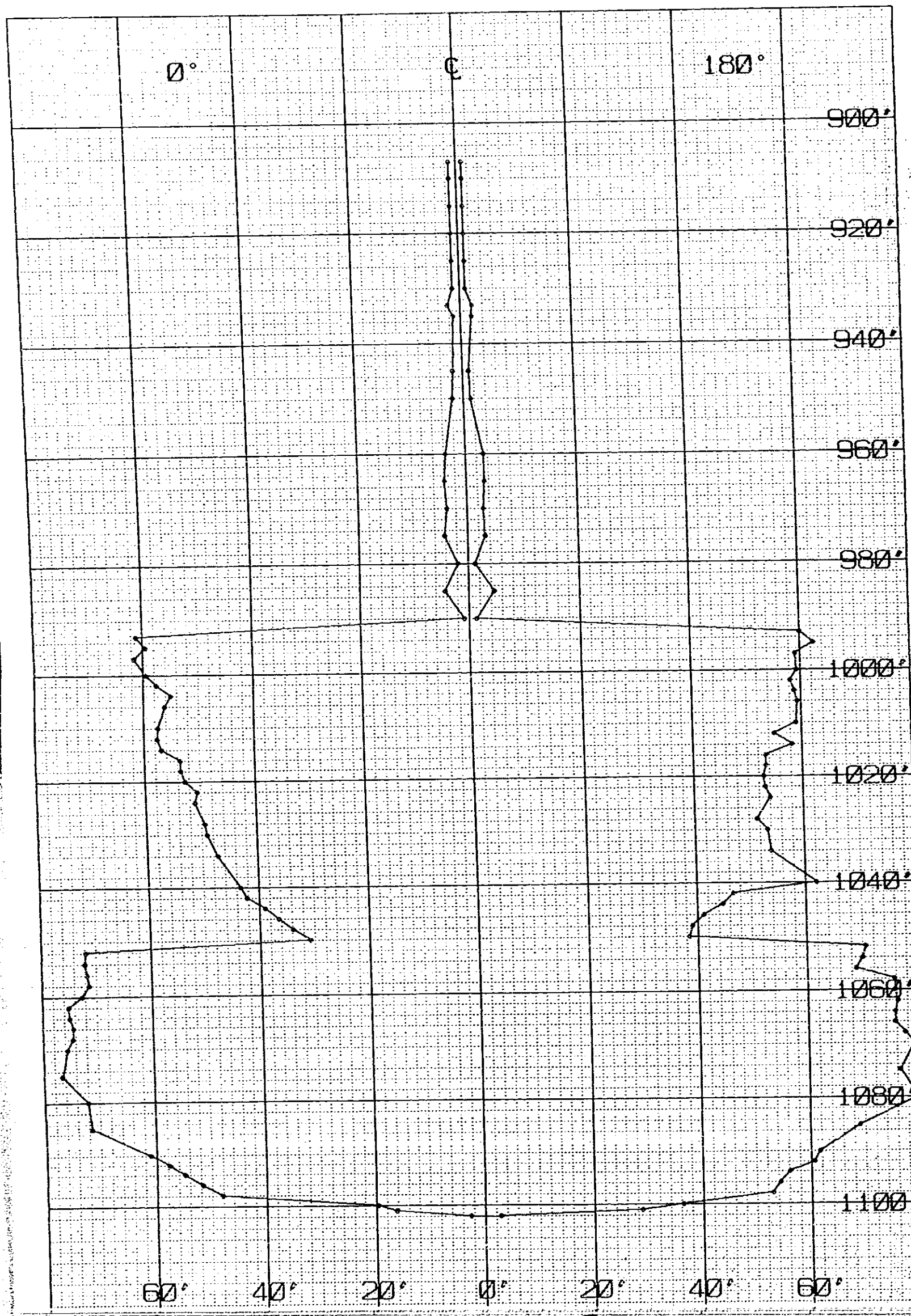
MAXIMUM HORIZONTAL RADII

| AZM deg | RADIUS ft | DEPTH ft |
|---|---|---|
| 180 | 79.7 | 1080 |
| 182 | 79.7 | 1080 |
| 184 | 79.2 | 1080 |
| 186 | 78.0 | 1080 |
| 188 | 77.2 | 1068 |
| 190 | 77.8 | 1068 |
| 192 | 77.4 | 1068 |
| 194 | 76.3 | 1068 |
| 196 | 76.5 | 1068 |
| 198 | 76.6 | 1068 |
| 200 | 75.5 | 1070 |
| 202 | 76.1 | 1070 |
| 204 | 76.1 | 1070 |
| 206 | 76.1 | 1070 |
| 208 | 76.1 | 1070 |
| 210 | 75.8 | 1070 |
| 212 | 76.2 | 1070 |
| 214 | 76.5 | 1070 |
| 216 | 76.3 | 1070 |
| 218 | 76.6 | 1070 |
| 220 | 76.8 | 1070 |
| 222 | 76.5 | 1070 |
| 224 | 75.8 | 1070 |
| 226 | 75.9 | 1075 |
| 228 | 76.0 | 1075 |
| 230 | 75.5 | 1068 |
| 232 | 76.4 | 1068 |
| 234 | 77.3 | 1068 |
| 236 | 76.3 | 1068 |
| 238 | 74.6 | 1070 |
| 240 | 75.1 | 1070 |
| 242 | 74.2 | 1070 |
| 244 | 74.2 | 1070 |
| 246 | 74.8 | 1070 |
| 248 | 74.6 | 1070 |
| 250 | 75.1 | 1070 |
| 252 | 76.1 | 1070 |
| 254 | 76.5 | 1070 |
| 256 | 76.8 | 1070 |
| 258 | 77.3 | 1070 |
| 260 | 77.5 | 1070 |
| 262 | 76.8 | 1070 |
| 264 | 77.1 | 1070 |
| 266 | 77.0 | 1070 |
| 268 | 76.8 | 1070 |
| 270 | 76.8 | 1070 |
| 272 | 78.2 | 1070 |
| 274 | 78.2 | 1070 |
| 276 | 77.8 | 1070 |
| 278 | 77.1 | 1070 |
| 280 | 76.8 | 1070 |
| 282 | 76.5 | 1070 |
| 284 | 76.8 | 1070 |
| 286 | 76.4 | 1068 |
| 288 | 75.8 | 1070 |
| 290 | 74.8 | 1070 |
| 292 | 74.8 | 1068 |
| 294 | 75.4 | 1070 |
| 296 | 75.8 | 1070 |
| 298 | 77.0 | 1070 |
| 300 | 76.6 | 1070 |
| 302 | 75.5 | 1070 |
| 304 | 75.8 | 1070 |
| 306 | 78.7 | 1070 |
| 308 | 79.1 | 1070 |
| 310 | 78.1 | 1070 |
| 312 | 77.1 | 1070 |
| 314 | 75.8 | 1070 |
| 316 | 76.1 | 1070 |
| 318 | 75.6 | 1070 |
| 320 | 75.0 | 1070 |
| 322 | 74.2 | 1062 |
| 324 | 74.1 | 1062 |
| 326 | 73.7 | 1068 |
| 328 | 74.0 | 1068 |
| 330 | 75.9 | 1075 |
| 332 | 76.2 | 1075 |
| 334 | 76.5 | 1075 |
| 336 | 77.3 | 1080 |
| 338 | 75.7 | 1075 |
| 340 | 76.7 | 1080 |
| 342 | 75.7 | 1075 |
| 344 | 75.4 | 1075 |
| 346 | 75.6 | 1075 |
| 348 | 76.3 | 1075 |
| 350 | 78.1 | 1075 |
| 352 | 79.1 | 1075 |
| 354 | 77.7 | 1075 |
| 356 | 76.6 | 1075 |
| 358 | 76.5 | 1075 |

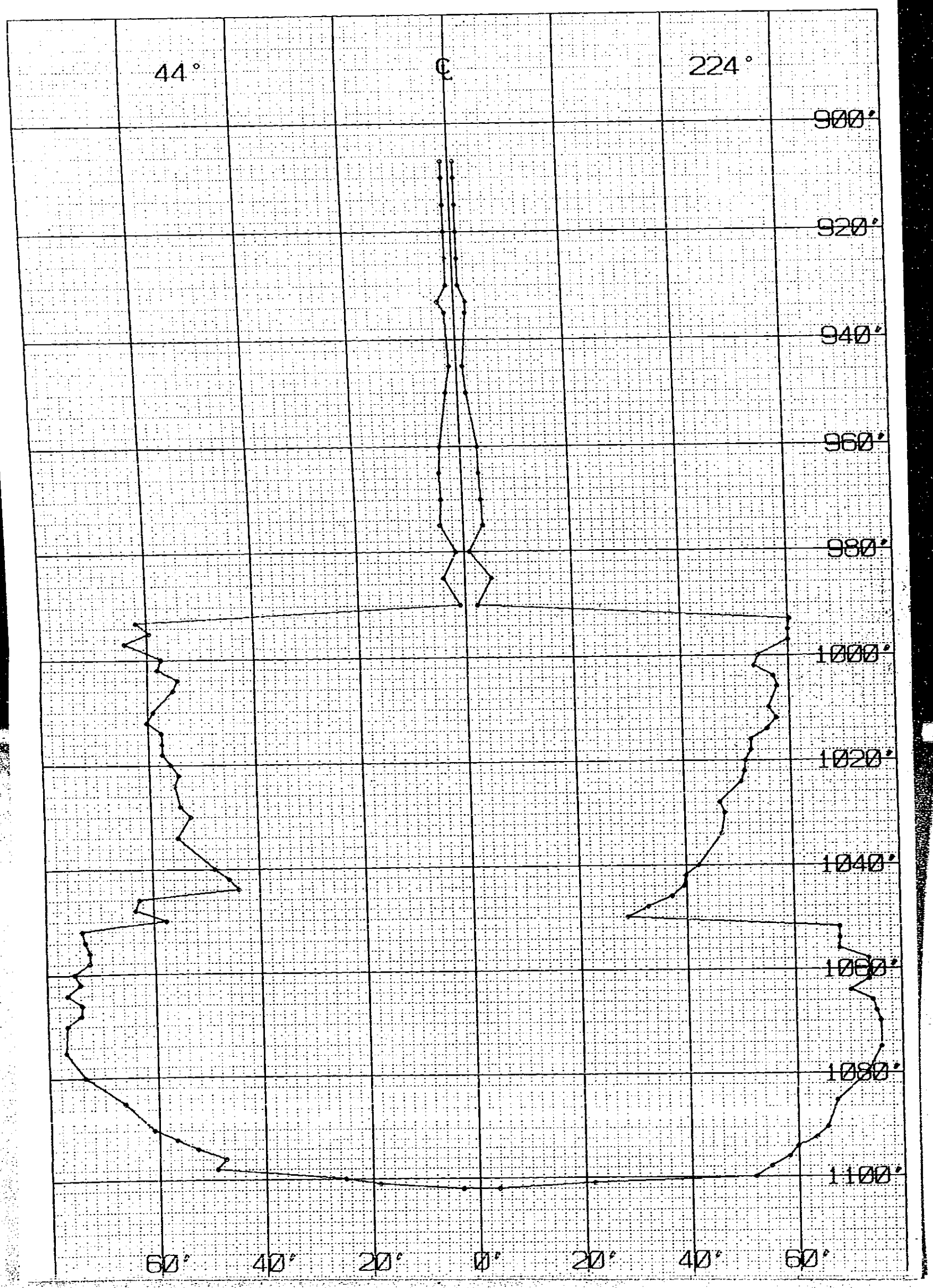
Maximum radius : 83.6
On Azmuth deg : 130


MAXIMUM RADIUS PLOT
SCALE : 1" = 50'
0 DEG.
90 DEG.
180 DEG.
270 DEG.

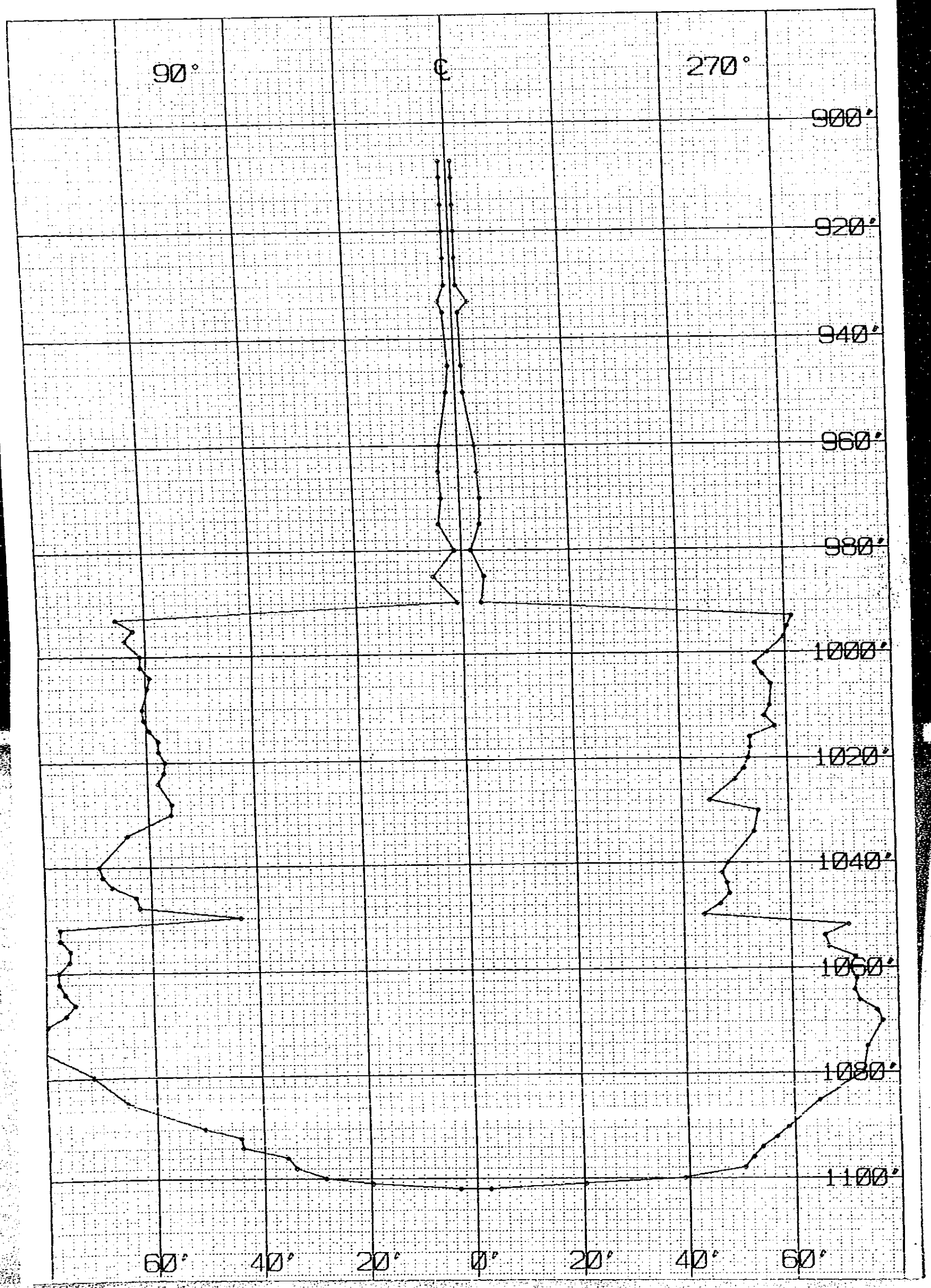
VERTICAL CROSSECTION



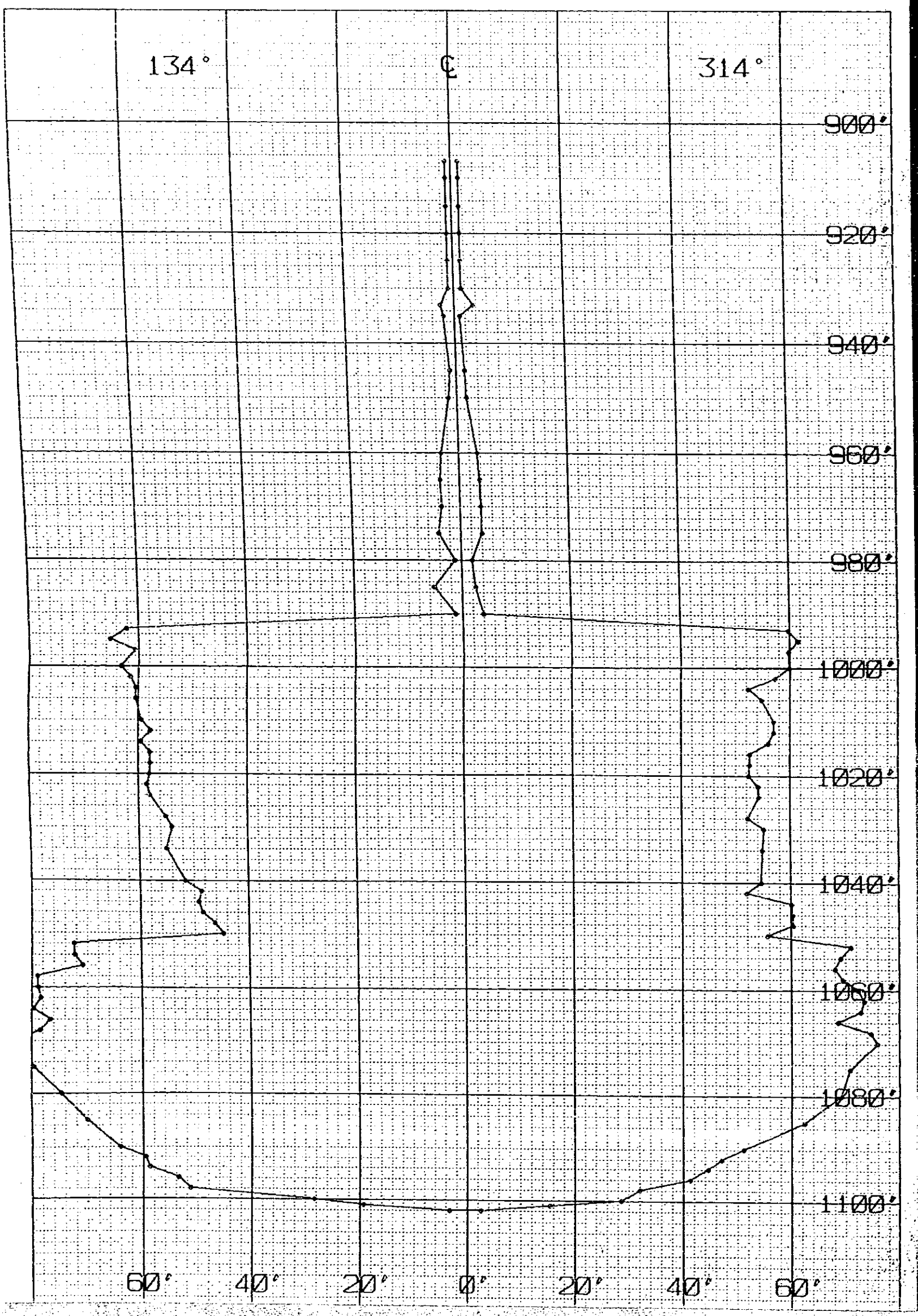
VERTICAL CROSSECTION



VERTICAL CROSSECTION



VERTICAL CROSSECTION



SONARWIRE

INC.

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

Survey conducted by: Gary McCool

Permit 672

FERRELLGAS
HOLBROOK, AZ.
STORAGE WELL NO. 11
MARCH 1, 1995
SONAR-THRU-PIPE SURVEY

MAR 1995
ARIZONA GEOLOGICAL SURVEY

Sonar from 960 ft. to 1101 ft.
Sonar T.D. at 1103 ft.
9 5/8 inch cemented casing at 906 ft.
7 inch intermediate pipe at 1003 ft.
4 1/2 inch tubing at 1100 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. 11 \HOLBROOK, AZ.
Wed, Mar 1, 1995 9:08

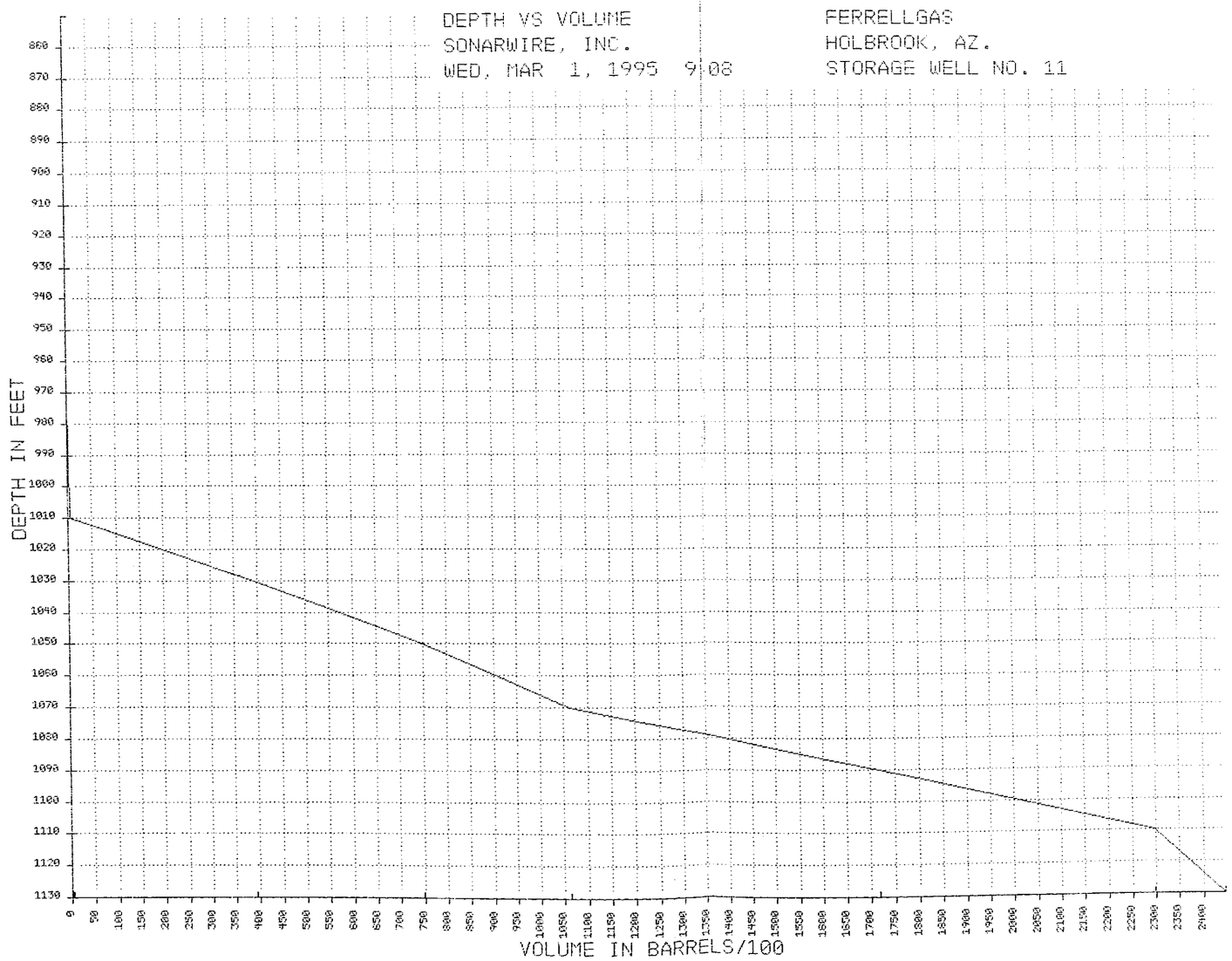
| Depth | Volume/foot | Total Volume |
|---|---|---|
| 908 | 0.6 | 0.6 |
| 909 | 0.6 | 1.1 |
| 910 | 0.6 | 1.7 |
| 911 | 0.6 | 2.3 |
| 912 | 0.6 | 2.8 |
| 913 | 0.6 | 3.4 |
| 914 | 0.6 | 4.0 |
| 915 | 0.6 | 4.6 |
| 916 | 0.6 | 5.2 |
| 917 | 0.6 | 5.8 |
| 918 | 0.6 | 6.5 |
| 919 | 0.6 | 7.1 |
| 920 | 0.6 | 7.7 |
| 921 | 0.7 | 8.4 |
| 922 | 0.7 | 9.1 |
| 923 | 0.7 | 9.8 |
| 924 | 0.8 | 10.5 |
| 925 | 0.8 | 11.3 |
| 926 | 0.8 | 12.2 |
| 927 | 0.9 | 13.0 |
| 928 | 0.9 | 13.9 |
| 929 | 0.9 | 14.9 |
| 930 | 1.0 | 15.8 |
| 931 | 1.0 | 16.9 |
| 932 | 1.1 | 17.9 |
| 933 | 1.1 | 19.0 |
| 934 | 1.2 | 20.2 |
| 935 | 1.2 | 21.4 |
| 936 | 1.2 | 22.6 |
| 937 | 1.2 | 23.9 |
| 938 | 1.3 | 25.1 |
| 939 | 1.3 | 26.4 |
| 940 | 1.3 | 27.7 |
| 941 | 1.3 | 29.0 |
| 942 | 1.3 | 30.3 |
| 943 | 1.3 | 31.7 |
| 944 | 1.4 | 33.0 |
| 945 | 1.4 | 34.4 |
| 946 | 1.4 | 35.8 |
| 947 | 1.4 | 37.2 |

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 948 | 1.4 | 38.7 |
| 949 | 1.5 | 40.2 |
| 950 | 1.5 | 41.7 |
| 951 | 1.7 | 43.3 |
| 952 | 2.1 | 45.4 |
| 953 | 2.5 | 47.9 |
| 954 | 3.0 | 51.0 |
| 955 | 3.5 | 54.5 |
| 956 | 4.1 | 58.6 |
| 957 | 4.7 | 63.3 |
| 958 | 5.4 | 68.6 |
| 959 | 6.1 | 74.7 |
| 960 | 6.8 | 81.5 |
| 961 | 7.2 | 88.7 |
| 962 | 7.3 | 96.0 |
| 963 | 7.3 | 103.3 |
| 964 | 7.4 | 110.7 |
| 965 | 7.4 | 118.1 |
| 966 | 7.5 | 125.6 |
| 967 | 7.6 | 133.2 |
| 968 | 7.6 | 140.8 |
| 969 | 7.7 | 148.5 |
| 970 | 7.8 | 156.3 |
| 971 | 7.8 | 164.1 |
| 972 | 7.9 | 172.0 |
| 973 | 7.9 | 179.9 |
| 974 | 8.0 | 187.9 |
| 975 | 8.1 | 196.0 |
| 976 | 7.2 | 203.2 |
| 977 | 5.6 | 208.8 |
| 978 | 4.2 | 213.0 |
| 979 | 2.9 | 215.9 |
| 980 | 2.0 | 217.9 |
| 981 | 2.6 | 220.5 |
| 982 | 5.6 | 226.0 |
| 983 | 9.6 | 235.6 |
| 984 | 14.8 | 250.4 |
| 985 | 21.0 | 271.4 |
| 986 | 22.7 | 294.1 |
| 987 | 19.3 | 313.4 |
| 988 | 16.3 | 329.7 |
| 989 | 13.7 | 343.4 |
| 990 | 11.5 | 354.9 |
| 991 | 233.6 | 588.4 |
| 992 | 1315.0 | 1903.5 |
| 993 | 2175.9 | 4079.4 |
| 994 | 2182.0 | 6261.3 |
| 995 | 2186.6 | 8447.9 |
| 996 | 2188.5 | 10636.4 |
| 997 | 2176.8 | 12813.2 |

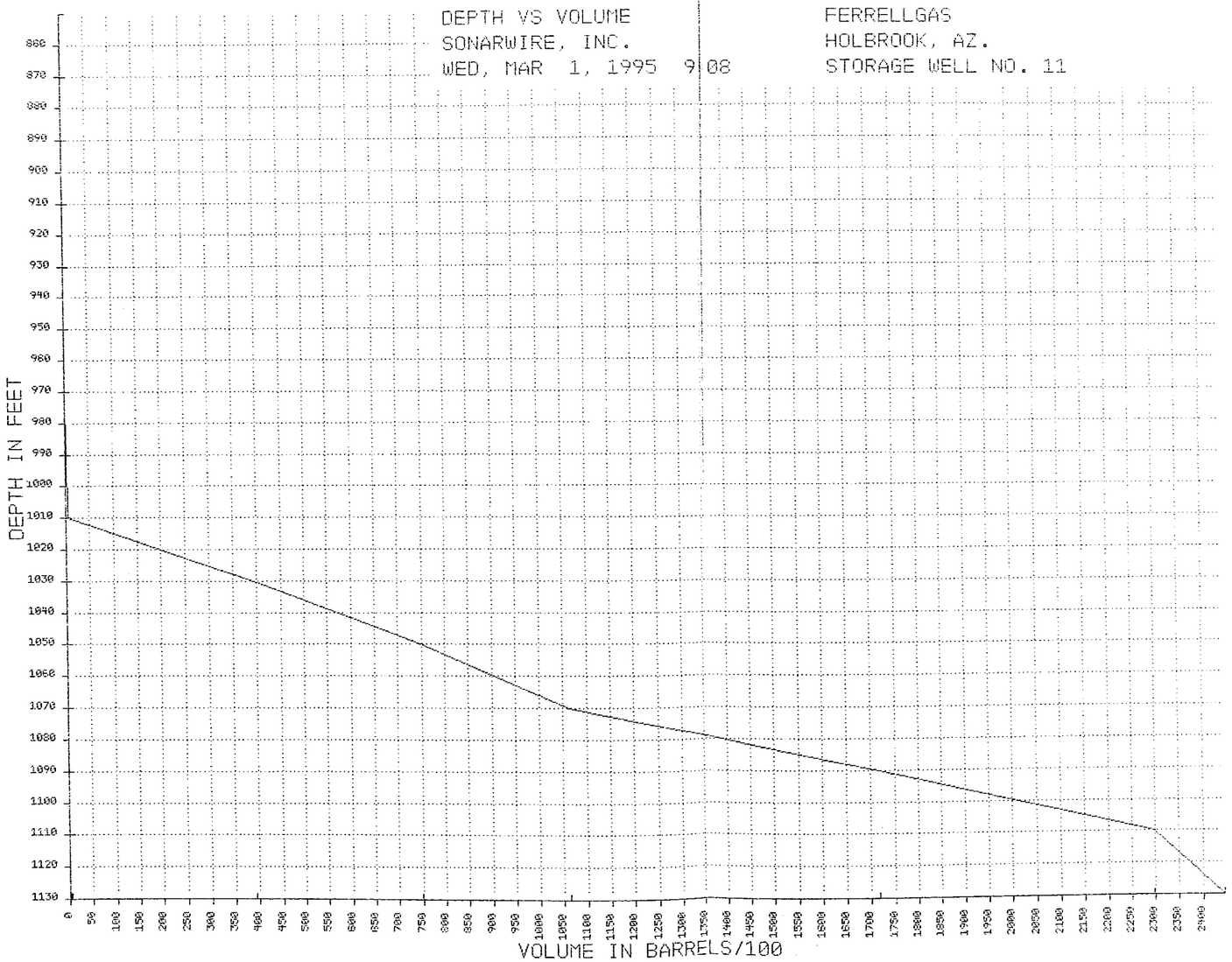
| Depth | Volume/foot | Total Volume |
|---|---|---|
| 998 | 2151.5 | 14964.7 |
| 999 | 2114.6 | 17079.3 |
| 1000 | 2066.8 | 19146.1 |
| 1001 | 2025.3 | 21171.3 |
| 1002 | 1989.9 | 23161.2 |
| 1003 | 1969.9 | 25131.1 |
| 1004 | 1965.3 | 27096.4 |
| 1005 | 1977.3 | 29073.7 |
| 1006 | 2005.8 | 31079.6 |
| 1007 | 2023.3 | 33102.9 |
| 1008 | 2029.6 | 35132.5 |
| 1009 | 2029.1 | 37161.6 |
| 1010 | 2021.7 | 39183.2 |
| 1011 | 2007.6 | 41190.8 |
| 1012 | 1986.9 | 43177.8 |
| 1013 | 1960.6 | 45138.4 |
| 1014 | 1928.9 | 47067.2 |
| 1015 | 1893.9 | 48961.2 |
| 1016 | 1856.0 | 50817.1 |
| 1017 | 1818.6 | 52635.8 |
| 1018 | 1781.7 | 54417.5 |
| 1019 | 1759.0 | 56176.4 |
| 1020 | 1750.3 | 57926.8 |
| 1021 | 1745.3 | 59672.1 |
| 1022 | 1745.9 | 61418.0 |
| 1023 | 1735.4 | 63153.4 |
| 1024 | 1712.9 | 64866.3 |
| 1025 | 1691.2 | 66557.5 |
| 1026 | 1670.0 | 68227.5 |
| 1027 | 1659.8 | 69887.3 |
| 1028 | 1661.2 | 71548.5 |
| 1029 | 1667.3 | 73215.8 |
| 1030 | 1677.2 | 74892.9 |
| 1031 | 1674.5 | 76567.4 |
| 1032 | 1659.1 | 78226.6 |
| 1033 | 1634.8 | 79861.4 |
| 1034 | 1602.5 | 81463.9 |
| 1035 | 1569.2 | 83033.1 |
| 1036 | 1534.0 | 84567.1 |
| 1037 | 1493.6 | 86060.7 |
| 1038 | 1449.0 | 87509.7 |
| 1039 | 1432.0 | 88941.7 |
| 1040 | 1442.1 | 90383.8 |
| 1041 | 1442.4 | 91826.2 |
| 1042 | 1434.3 | 93260.5 |
| 1043 | 1438.7 | 94699.2 |
| 1044 | 1459.9 | 96159.1 |
| 1045 | 1482.1 | 97641.2 |
| 1046 | 1506.8 | 99148.0 |
| 1047 | 1462.5 | 100610.5 |

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 1048 | 1351.2 | 101961.7 |
| 1049 | 1680.0 | 103641.7 |
| 1050 | 2600.5 | 106242.1 |
| 1051 | 3131.9 | 109374.0 |
| 1052 | 3112.8 | 112486.8 |
| 1053 | 3092.0 | 115578.8 |
| 1054 | 3069.6 | 118648.4 |
| 1055 | 3055.5 | 121703.9 |
| 1056 | 3050.0 | 124754.0 |
| 1057 | 3078.6 | 127832.5 |
| 1058 | 3142.1 | 130974.6 |
| 1059 | 3200.1 | 134174.7 |
| 1060 | 3252.1 | 137426.8 |
| 1061 | 3290.8 | 140717.6 |
| 1062 | 3315.9 | 144033.5 |
| 1063 | 3324.9 | 147358.3 |
| 1064 | 3317.6 | 150676.0 |
| 1065 | 3355.5 | 154031.5 |
| 1066 | 3439.1 | 157470.6 |
| 1067 | 3495.9 | 160966.5 |
| 1068 | 3525.3 | 164491.8 |
| 1069 | 3564.9 | 168056.7 |
| 1070 | 3615.0 | 171671.7 |
| 1071 | 3624.4 | 175296.1 |
| 1072 | 3592.7 | 178888.8 |
| 1073 | 3561.2 | 182450.0 |
| 1074 | 3529.9 | 185979.9 |
| 1075 | 3499.0 | 189478.9 |
| 1076 | 3421.4 | 192900.3 |
| 1077 | 3298.7 | 196199.0 |
| 1078 | 3178.4 | 199377.4 |
| 1079 | 3060.7 | 202438.1 |
| 1080 | 2945.4 | 205383.5 |
| 1081 | 2843.6 | 208227.1 |
| 1082 | 2754.6 | 210981.7 |
| 1083 | 2667.2 | 213648.9 |
| 1084 | 2581.2 | 216230.1 |
| 1085 | 2496.8 | 218726.9 |
| 1086 | 2402.2 | 221129.1 |
| 1087 | 2298.1 | 223427.2 |
| 1088 | 2196.4 | 225623.6 |
| 1089 | 2097.2 | 227720.8 |
| 1090 | 2000.4 | 229721.3 |
| 1091 | 1908.2 | 231629.5 |
| 1092 | 1820.6 | 233450.1 |
| 1093 | 1750.1 | 235200.2 |
| 1094 | 1696.8 | 236897.0 |
| 1095 | 1604.8 | 238501.8 |
| 1096 | 1492.8 | 239994.6 |
| 1097 | 1375.2 | 241369.8 |

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 1098 | 1257.0 | 242626.8 |
| 1099 | 1020.6 | 243647.4 |
| 1100 | 693.4 | 244340.8 |
| 1101 | 195.7 | 244536.5 |
| 1102 | 0.9 | 244537.4 |
| 1103 | 0.1 | 244537.4 |




Ferrellgas, Inc.
NW Sec 8-T18N




Ferrellgas, Inc.
NW Sec 8-T18N

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

Sonarwire, Inc.
FERRELLGAS
STORAGE WELL NO. 11 \HOLBROOK, AZ.
Wed, Mar 1, 1995 9:08

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 908 | 3.1 | 3.1 |
| 909 | 3.1 | 6.3 |
| 910 | 3.2 | 9.4 |
| 911 | 3.2 | 12.7 |
| 912 | 3.3 | 15.9 |
| 913 | 3.3 | 19.2 |
| 914 | 3.3 | 22.6 |
| 915 | 3.4 | 25.9 |
| 916 | 3.4 | 29.3 |
| 917 | 3.5 | 32.8 |
| 918 | 3.5 | 36.3 |
| 919 | 3.5 | 39.8 |
| 920 | 3.6 | 43.4 |
| 921 | 3.7 | 47.1 |
| 922 | 3.9 | 51.0 |
| 923 | 4.0 | 55.0 |
| 924 | 4.2 | 59.2 |
| 925 | 4.4 | 63.6 |
| 926 | 4.6 | 68.2 |
| 927 | 4.8 | 73.1 |
| 928 | 5.0 | 78.1 |
| 929 | 5.3 | 83.4 |
| 930 | 5.5 | 88.9 |
| 931 | 5.7 | 94.6 |
| 932 | 6.0 | 100.6 |
| 933 | 6.2 | 106.9 |
| 934 | 6.5 | 113.4 |
| 935 | 6.8 | 120.1 |
| 936 | 7.0 | 127.1 |
| 937 | 7.0 | 134.1 |
| 938 | 7.1 | 141.2 |
| 939 | 7.2 | 148.4 |
| 940 | 7.2 | 155.6 |
| 941 | 7.3 | 162.9 |
| 942 | 7.4 | 170.4 |
| 943 | 7.5 | 177.9 |
| 944 | 7.6 | 185.5 |
| 945 | 7.7 | 193.3 |
| 946 | 7.9 | 201.1 |
| 947 | 8.0 | 209.1 |

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 948 | 8.1 | 217.2 |
| 949 | 8.3 | 225.5 |
| 950 | 8.4 | 233.9 |
| 951 | 9.5 | 243.4 |
| 952 | 11.7 | 255.1 |
| 953 | 14.2 | 269.2 |
| 954 | 16.9 | 286.1 |
| 955 | 19.8 | 305.9 |
| 956 | 23.0 | 328.8 |
| 957 | 26.4 | 355.3 |
| 958 | 30.1 | 385.4 |
| 959 | 34.0 | 419.4 |
| 960 | 38.2 | 457.6 |
| 961 | 40.5 | 498.0 |
| 962 | 40.8 | 538.8 |
| 963 | 41.1 | 579.9 |
| 964 | 41.4 | 621.3 |
| 965 | 41.8 | 663.1 |
| 966 | 42.2 | 705.2 |
| 967 | 42.5 | 747.7 |
| 968 | 42.8 | 790.6 |
| 969 | 43.2 | 833.8 |
| 970 | 43.5 | 877.3 |
| 971 | 43.9 | 921.2 |
| 972 | 44.2 | 965.4 |
| 973 | 44.6 | 1010.0 |
| 974 | 45.0 | 1055.0 |
| 975 | 45.4 | 1100.4 |
| 976 | 40.5 | 1140.9 |
| 977 | 31.4 | 1172.3 |
| 978 | 23.4 | 1195.6 |
| 979 | 16.6 | 1212.2 |
| 980 | 11.0 | 1223.2 |
| 981 | 14.7 | 1237.9 |
| 982 | 31.2 | 1269.0 |
| 983 | 53.9 | 1322.9 |
| 984 | 82.9 | 1405.8 |
| 985 | 118.1 | 1523.9 |
| 986 | 127.5 | 1651.4 |
| 987 | 108.4 | 1759.8 |
| 988 | 91.5 | 1851.3 |
| 989 | 76.8 | 1928.1 |
| 990 | 64.3 | 1992.4 |
| 991 | 1311.4 | 3303.8 |
| 992 | 7383.4 | 10687.2 |
| 993 | 12216.7 | 22903.9 |
| 994 | 12250.9 | 35154.8 |
| 995 | 12276.7 | 47431.4 |
| 996 | 12287.7 | 59719.2 |
| 997 | 12221.7 | 71940.9 |

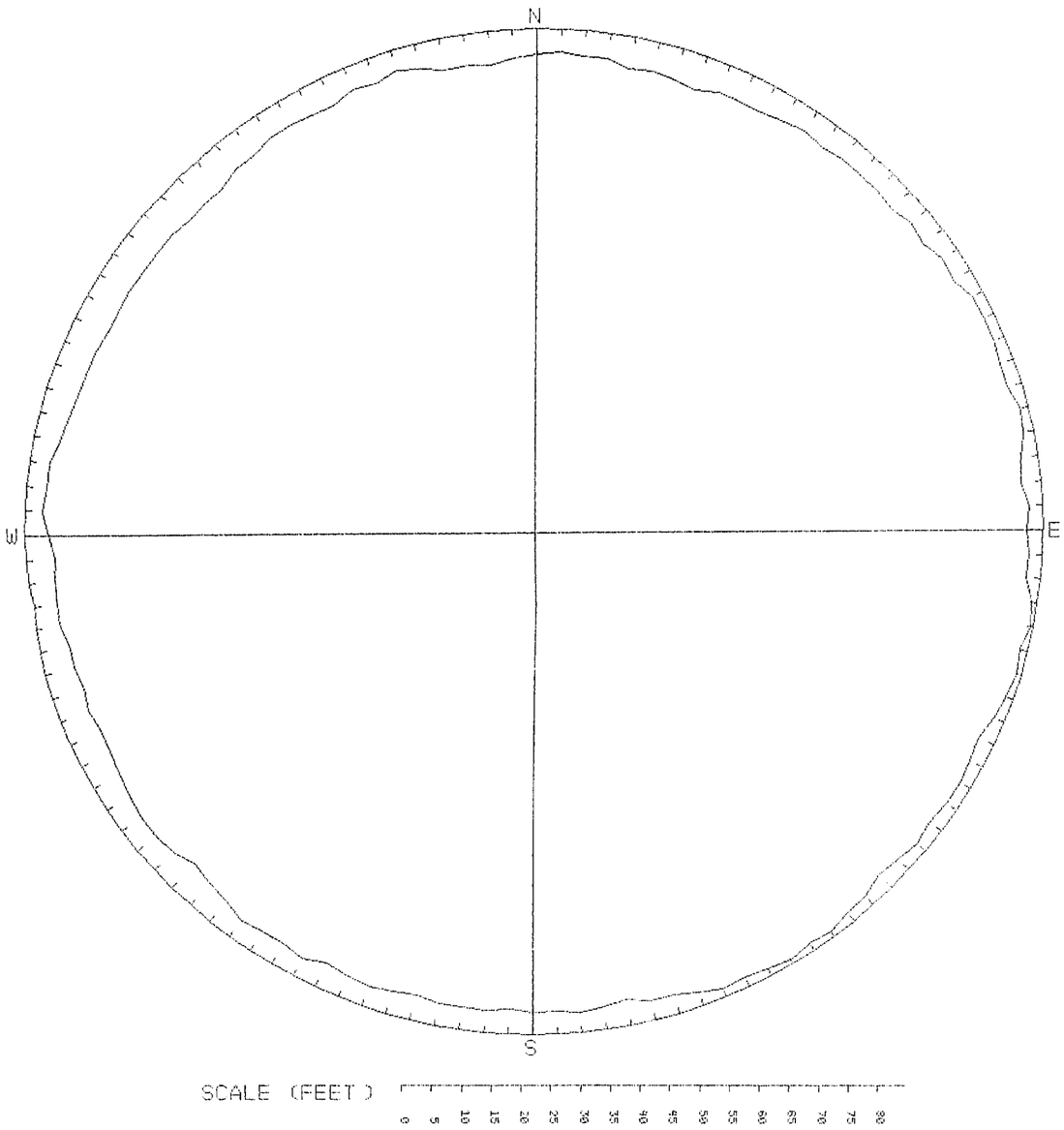
| Depth | Volume/foot | Total Volume |
|---|---|---|
| 998 | 12079.7 | 84020.5 |
| 999 | 11872.8 | 95893.3 |
| 1000 | 11604.0 | 107497.3 |
| 1001 | 11370.9 | 118868.2 |
| 1002 | 11172.2 | 130040.4 |
| 1003 | 11060.1 | 141100.6 |
| 1004 | 11034.4 | 152135.0 |
| 1005 | 11101.9 | 163236.9 |
| 1006 | 11261.9 | 174498.7 |
| 1007 | 11360.1 | 185858.8 |
| 1008 | 11395.4 | 197254.2 |
| 1009 | 11392.3 | 208646.5 |
| 1010 | 11350.8 | 219997.4 |
| 1011 | 11271.8 | 231269.2 |
| 1012 | 11155.8 | 242425.0 |
| 1013 | 11008.1 | 253433.0 |
| 1014 | 10829.8 | 264262.8 |
| 1015 | 10633.5 | 274896.3 |
| 1016 | 10420.5 | 285316.8 |
| 1017 | 10210.9 | 295527.7 |
| 1018 | 10003.5 | 305531.2 |
| 1019 | 9875.9 | 315407.2 |
| 1020 | 9827.5 | 325234.6 |
| 1021 | 9799.2 | 335033.9 |
| 1022 | 9802.6 | 344836.5 |
| 1023 | 9743.4 | 354579.9 |
| 1024 | 9617.1 | 364197.0 |
| 1025 | 9495.6 | 373692.6 |
| 1026 | 9376.3 | 383068.9 |
| 1027 | 9318.9 | 392387.8 |
| 1028 | 9326.9 | 401714.7 |
| 1029 | 9361.2 | 411075.9 |
| 1030 | 9416.6 | 420492.5 |
| 1031 | 9401.6 | 429894.1 |
| 1032 | 9315.4 | 439209.5 |
| 1033 | 9178.6 | 448388.0 |
| 1034 | 8997.3 | 457385.4 |
| 1035 | 8810.5 | 466195.9 |
| 1036 | 8612.8 | 474808.7 |
| 1037 | 8386.0 | 483194.7 |
| 1038 | 8135.8 | 491330.5 |
| 1039 | 8040.1 | 499370.6 |
| 1040 | 8096.7 | 507467.3 |
| 1041 | 8098.5 | 515565.8 |
| 1042 | 8053.0 | 523618.8 |
| 1043 | 8077.7 | 531696.5 |
| 1044 | 8196.4 | 539892.9 |
| 1045 | 8321.6 | 548214.6 |
| 1046 | 8460.0 | 556674.6 |
| 1047 | 8211.4 | 564885.9 |

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 1048 | 7586.2 | 572472.2 |
| 1049 | 9432.2 | 581904.4 |
| 1050 | 14600.5 | 596504.9 |
| 1051 | 17584.0 | 614088.9 |
| 1052 | 17477.2 | 631566.1 |
| 1053 | 17360.4 | 648926.4 |
| 1054 | 17234.3 | 666160.8 |
| 1055 | 17155.6 | 683316.4 |
| 1056 | 17124.6 | 700441.0 |
| 1057 | 17284.9 | 717725.9 |
| 1058 | 17641.5 | 735367.4 |
| 1059 | 17967.0 | 753334.4 |
| 1060 | 18259.1 | 771593.6 |
| 1061 | 18476.6 | 790070.2 |
| 1062 | 18617.3 | 808687.5 |
| 1063 | 18667.7 | 827355.3 |
| 1064 | 18627.2 | 845982.4 |
| 1065 | 18839.8 | 864822.2 |
| 1066 | 19309.1 | 884131.3 |
| 1067 | 19628.0 | 903759.3 |
| 1068 | 19793.2 | 923552.5 |
| 1069 | 20015.6 | 943568.1 |
| 1070 | 20296.7 | 963864.8 |
| 1071 | 20349.6 | 984214.4 |
| 1072 | 20171.3 | 1004385.6 |
| 1073 | 19994.5 | 1024380.1 |
| 1074 | 19819.2 | 1044199.2 |
| 1075 | 19645.3 | 1063844.5 |
| 1076 | 19209.8 | 1083054.3 |
| 1077 | 18520.7 | 1101575.0 |
| 1078 | 17845.6 | 1119420.6 |
| 1079 | 17184.4 | 1136605.0 |
| 1080 | 16537.2 | 1153142.3 |
| 1081 | 15965.6 | 1169107.9 |
| 1082 | 15466.1 | 1184574.0 |
| 1083 | 14975.1 | 1199549.0 |
| 1084 | 14492.5 | 1214041.5 |
| 1085 | 14018.5 | 1228060.0 |
| 1086 | 13487.4 | 1241547.5 |
| 1087 | 12902.8 | 1254450.4 |
| 1088 | 12332.0 | 1266782.4 |
| 1089 | 11774.9 | 1278557.3 |
| 1090 | 11231.5 | 1289788.8 |
| 1091 | 10713.8 | 1300502.6 |
| 1092 | 10221.9 | 1310724.5 |
| 1093 | 9826.3 | 1320550.8 |
| 1094 | 9526.8 | 1330077.5 |
| 1095 | 9010.5 | 1339088.0 |
| 1096 | 8381.4 | 1347469.4 |
| 1097 | 7721.3 | 1355190.6 |

| Depth | Volume/foot | Total Volume |
|---|---|---|
| 1098 | 7057.4 | 1362248.0 |
| 1099 | 5730.0 | 1367978.0 |
| 1100 | 3893.1 | 1371871.1 |
| 1101 | 1098.9 | 1372970.0 |
| 1102 | 4.9 | 1372974.9 |
| 1103 | 0.5 | 1372975.4 |

MAX RANGE VS BEARING
SONARWIRE, INC.
WED, MAR 1, 1995 9:08

FERRELLGAS
HOLBROOK, AZ.
STORAGE WELL NO. 11



MAXIMUM RADIUS and DEPTH VS BEARING SONARWIRE, INC.
FERRELLGAS Wed, Mar 1, 1995 9:08
STORAGE WELL NO. 11 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 | 80 : 1070 | 81 : 1070 | 80 : 1070 | 80 : 1070 |
| 11.3 | 79 : 1070 | 80 : 1070 | 79 : 1070 | 79 : 1068 |
| 22.5 | 80 : 1070 | 80 : 1070 | 80 : 1070 | 80 : 1070 |
| 33.8 | 81 : 1070 | 80 : 1070 | 81 : 1070 | 81 : 1070 |
| 45.0 | 81 : 1070 | 80 : 1070 | 81 : 1070 | 81 : 1070 |
| 56.3 | 82 : 1070 | 81 : 1070 | 83 : 1070 | 83 : 1070 |
| 67.5 | 83 : 1070 | 82 : 1070 | 82 : 1070 | 83 : 1070 |
| 78.8 | 83 : 1070 | 82 : 1070 | 81 : 1066 | 82 : 1070 |
| 90.0 | 82 : 1070 | 82 : 1070 | 82 : 1070 | 84 : 1070 |
| 101.3 | 84 : 1070 | 83 : 1070 | 84 : 1070 | 83 : 1070 |
| 112.5 | 83 : 1070 | 82 : 1068 | 82 : 1070 | 83 : 1068 |
| 123.8 | 83 : 1070 | 82 : 1068 | 83 : 1068 | 82 : 1070 |
| 135.0 | 82 : 1070 | 83 : 1068 | 83 : 1068 | 84 : 1068 |
| 146.3 | 83 : 1068 | 84 : 1068 | 83 : 1068 | 83 : 1068 |
| 157.5 | 83 : 1068 | 82 : 1068 | 81 : 1066 | 81 : 1068 |
| 168.8 | 80 : 1068 | 81 : 1068 | 81 : 1068 | 81 : 1068 |
| 180.0 | 81 : 1070 | 80 : 1070 | 81 : 1070 | 81 : 1070 |
| 191.3 | 81 : 1070 | 80 : 1070 | 81 : 1070 | 81 : 1070 |
| 202.5 | 81 : 1070 | 80 : 1070 | 81 : 1070 | 81 : 1070 |
| 213.8 | 81 : 1070 | 81 : 1070 | 80 : 1070 | 80 : 1066 |
| 225.0 | 79 : 1066 | 80 : 1070 | 81 : 1070 | 81 : 1070 |
| 236.3 | 80 : 1070 | 80 : 1070 | 79 : 1070 | 79 : 1070 |
| 247.5 | 80 : 1070 | 79 : 1070 | 80 : 1070 | 80 : 1070 |
| 258.8 | 81 : 1070 | 81 : 1070 | 80 : 1070 | 80 : 1068 |
| 270.0 | 81 : 1075 | 82 : 1075 | 81 : 1075 | 81 : 1075 |
| 281.3 | 80 : 1075 | 80 : 1066 | 79 : 1066 | 79 : 1066 |
| 292.5 | 79 : 1068 | 79 : 1068 | 79 : 1068 | 79 : 1068 |
| 303.8 | 79 : 1068 | 79 : 1068 | 79 : 1068 | 78 : 1068 |
| 315.0 | 78 : 1068 | 78 : 1070 | 79 : 1070 | 79 : 1070 |
| 326.3 | 80 : 1075 | 80 : 1075 | 80 : 1075 | 80 : 1075 |
| 337.5 | 81 : 1075 | 80 : 1075 | 81 : 1075 | 80 : 1075 |
| 348.8 | 79 : 1075 | 79 : 1070 | 79 : 1070 | 80 : 1070 |

Between 907 and 1101 foot depths, maximum radius was 84 feet at bearing 101.3 at 1070 foot depth.

Wall Ranges versus Depth
Sonarwire, Inc.
FERRELLGAS
STORAGE WELL NO. 11
Wed, Mar 1, 1995 9:08
HOLBROOK, AZ.

| Depth | N | NE | E | SE | S | SW | W | NW |
|---|---|---|---|---|---|---|---|---|
| 907 | 0.8 | 1.2 | 1.2 | 1.2 | 1.2 | 0.8 | 0.8 | 0.8 |
| 920 | 0.8 | 1.3 | 1.3 | 1.3 | 1.3 | 0.9 | 0.9 | 0.8 |
| 935 | 1.2 | 1.2 | 1.3 | 1.6 | 1.6 | 1.9 | 1.9 | 1.3 |
| 950 | 1.5 | 1.7 | 1.9 | 2.0 | 1.7 | 1.5 | 1.3 | 1.5 |
| 960 | 3.4 | 3.4 | 3.6 | 3.8 | 3.9 | 3.8 | 3.7 | 3.5 |
| 965 | 3.9 | 3.9 | 4.0 | 4.0 | 3.5 | 3.4 | 3.4 | 3.4 |
| 975 | 3.7 | 3.8 | 4.1 | 4.3 | 4.1 | 3.8 | 3.4 | 3.4 |
| 980 | 1.7 | 1.9 | 2.0 | 1.8 | 1.5 | 1.4 | 1.4 | 1.5 |
| 985 | 6.5 | 6.9 | 7.1 | 6.9 | 6.5 | 6.5 | 6.4 | 6.5 |
| 990 | 4.2 | 5.0 | 6.9 | 6.2 | 2.7 | 2.5 | 2.2 | 2.6 |
| 992 | 62.2 | 60.3 | 61.4 | 60.7 | 61.1 | 63.7 | 65.2 | 64.1 |
| 994 | 61.4 | 61.1 | 61.4 | 63.3 | 66.4 | 63.7 | 61.8 | 60.3 |
| 996 | 61.4 | 61.1 | 61.8 | 63.7 | 65.6 | 63.3 | 61.1 | 60.3 |
| 998 | 62.6 | 60.3 | 61.8 | 63.0 | 65.6 | 61.8 | 60.7 | 60.3 |
| 1000 | 61.4 | 61.1 | 62.2 | 62.6 | 61.4 | 58.1 | 57.7 | 57.7 |
| 1002 | 58.4 | 60.3 | 61.4 | 61.8 | 61.1 | 59.2 | 58.4 | 58.1 |
| 1004 | 56.9 | 58.1 | 60.3 | 61.1 | 61.1 | 60.3 | 59.6 | 58.4 |
| 1006 | 58.8 | 58.1 | 59.6 | 61.1 | 61.4 | 61.8 | 60.3 | 58.8 |
| 1008 | 59.9 | 59.2 | 60.3 | 60.7 | 61.8 | 61.4 | 60.7 | 59.2 |
| 1010 | 58.8 | 58.8 | 59.9 | 60.7 | 61.4 | 61.1 | 59.6 | 58.8 |
| 1012 | 59.2 | 58.4 | 59.2 | 59.9 | 61.8 | 60.7 | 58.8 | 58.4 |
| 1014 | 57.7 | 57.3 | 56.9 | 58.8 | 59.9 | 61.1 | 57.7 | 56.5 |
| 1016 | 56.9 | 55.4 | 56.5 | 58.8 | 60.3 | 59.2 | 56.5 | 55.0 |
| 1018 | 54.3 | 55.4 | 55.0 | 57.7 | 59.9 | 57.3 | 53.9 | 54.3 |
| 1020 | 55.4 | 53.5 | 56.9 | 58.4 | 59.6 | 55.8 | 52.8 | 53.5 |
| 1022 | 55.0 | 58.4 | 59.6 | 59.6 | 53.5 | 53.2 | 55.4 | 54.7 |
| 1024 | 52.8 | 54.3 | 58.8 | 58.5 | 57.3 | 51.3 | 52.0 | 54.3 |
| 1026 | 56.9 | 50.9 | 58.8 | 59.2 | 56.9 | 51.3 | 50.2 | 50.9 |
| 1028 | 50.2 | 50.9 | 57.3 | 57.7 | 57.7 | 51.3 | 50.2 | 55.1 |
| 1030 | 53.6 | 49.4 | 59.6 | 59.2 | 56.6 | 51.3 | 51.3 | 57.7 |
| 1032 | 55.1 | 49.8 | 55.1 | 60.3 | 56.2 | 51.3 | 49.8 | 56.6 |
| 1034 | 56.9 | 48.3 | 52.4 | 61.1 | 55.4 | 50.5 | 46.4 | 54.7 |
| 1036 | 55.1 | 47.1 | 53.2 | 59.6 | 53.9 | 49.0 | 45.3 | 52.0 |
| 1038 | 55.4 | 45.6 | 45.6 | 59.2 | 52.0 | 47.5 | 42.6 | 53.9 |
| 1040 | 56.2 | 47.1 | 45.3 | 60.7 | 52.4 | 46.8 | 42.2 | 54.7 |
| 1042 | 58.5 | 44.5 | 44.5 | 64.1 | 50.5 | 44.5 | 38.5 | 51.3 |
| 1044 | 57.7 | 58.5 | 43.0 | 63.0 | 51.3 | 43.7 | 39.2 | 46.0 |
| 1046 | 58.1 | 60.0 | 61.8 | 63.0 | 42.2 | 39.6 | 35.4 | 48.3 |
| 1048 | 55.4 | 52.0 | 58.8 | 61.5 | 44.9 | 38.1 | 29.0 | 44.1 |
| 1050 | 77.0 | 77.5 | 75.6 | 75.2 | 73.8 | 71.0 | 72.9 | 75.2 |
| 1052 | 76.6 | 77.0 | 76.6 | 74.7 | 74.3 | 70.1 | 71.5 | 74.7 |
| 1054 | 75.6 | 76.1 | 76.6 | 74.3 | 72.9 | 70.1 | 69.6 | 73.3 |
| 1056 | 75.2 | 75.6 | 78.4 | 74.7 | 72.4 | 71.9 | 69.6 | 72.9 |

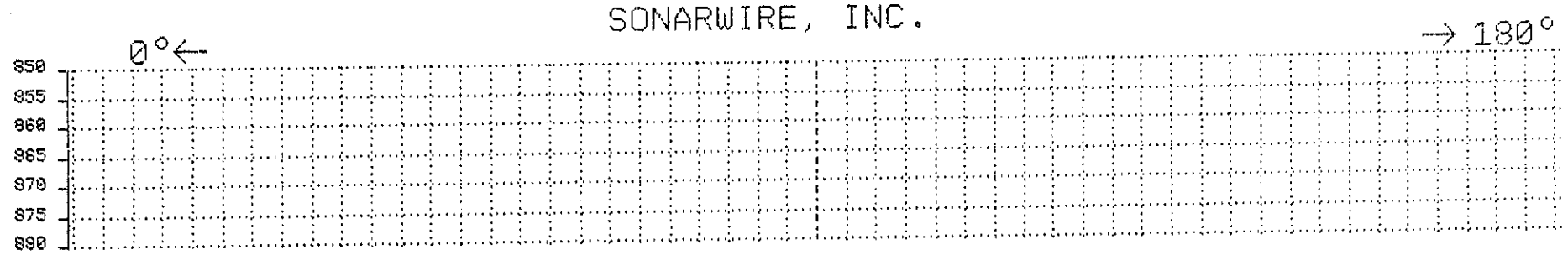
| Depth | N | NE | E | SE | S | SW | W | NW |
|---|---|---|---|---|---|---|---|---|
| 1058 | 75.2 | 76.6 | 79.4 | 74.3 | 72.4 | 76.6 | 71.9 | 76.6 |
| 1060 | 75.2 | 76.6 | 80.3 | 77.5 | 77.5 | 77.5 | 74.7 | 76.1 |
| 1062 | 76.1 | 77.5 | 80.3 | 78.4 | 78.0 | 78.0 | 74.3 | 74.7 |
| 1064 | 77.0 | 76.6 | 78.0 | 78.0 | 76.1 | 77.0 | 75.2 | 77.0 |
| 1066 | 76.4 | 77.4 | 80.5 | 81.0 | 79.9 | 79.4 | 77.9 | 77.9 |
| 1068 | 77.4 | 78.9 | 81.0 | 81.5 | 80.5 | 78.4 | 79.9 | 78.4 |
| 1070 | 80.5 | 81.0 | 82.0 | 82.0 | 81.0 | 79.4 | 80.5 | 78.4 |
| 1075 | 78.9 | 77.4 | 81.9 | 79.9 | 79.9 | 78.4 | 80.9 | 74.8 |
| 1080 | 72.3 | 73.3 | 72.3 | 70.8 | 72.8 | 71.3 | 69.8 | 71.3 |
| 1085 | 68.8 | 66.2 | 66.2 | 65.7 | 65.7 | 64.7 | 67.3 | 66.2 |
| 1090 | 59.2 | 59.7 | 58.7 | 58.1 | 59.7 | 59.2 | 57.6 | 58.1 |
| 1092 | 55.7 | 56.6 | 56.6 | 55.2 | 56.6 | 58.5 | 56.6 | 56.2 |
| 1094 | 54.8 | 54.3 | 53.4 | 49.7 | 57.1 | 55.2 | 56.6 | 57.1 |
| 1096 | 57.5 | 57.1 | 44.1 | 35.7 | 32.5 | 58.9 | 58.9 | 58.0 |
| 1098 | 52.0 | 58.0 | 54.3 | 42.7 | 27.8 | 32.9 | 37.6 | 52.9 |
| 1100 | 39.4 | 41.8 | 28.3 | 19.0 | 20.0 | 29.2 | 31.6 | 30.6 |
| 1101 | 1.9 | 2.3 | 1.8 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

| Depth | Tilt | N | NE | E | SE | S | SW | W | NW |
|---|---|---|---|---|---|---|---|---|---|
| 1101 | -90 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |

FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 11
WED, MAR 1, 1995 9:08

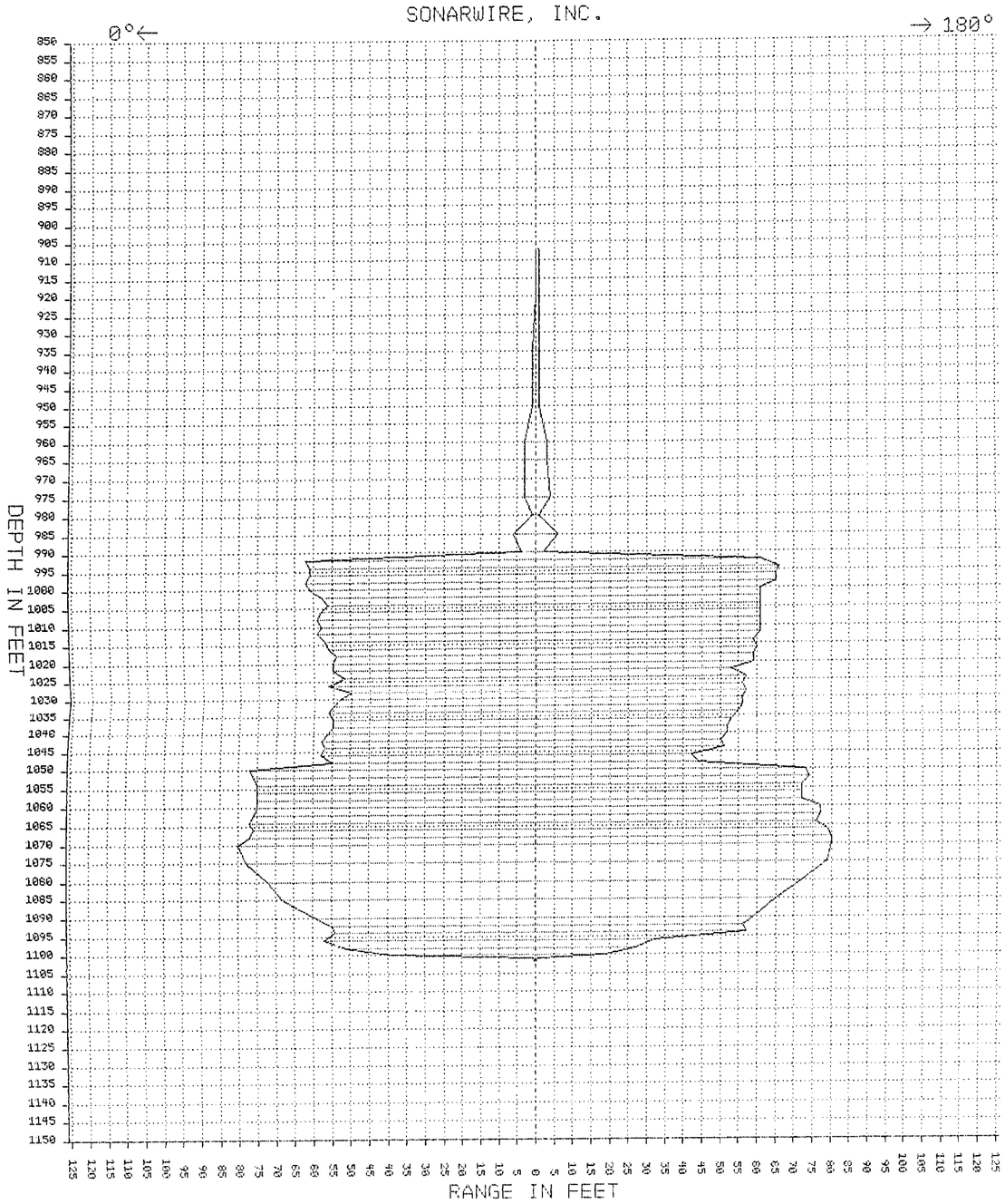
VERTICAL CROSS-SECTION
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 11
WED, MAR 1, 1995 9:08

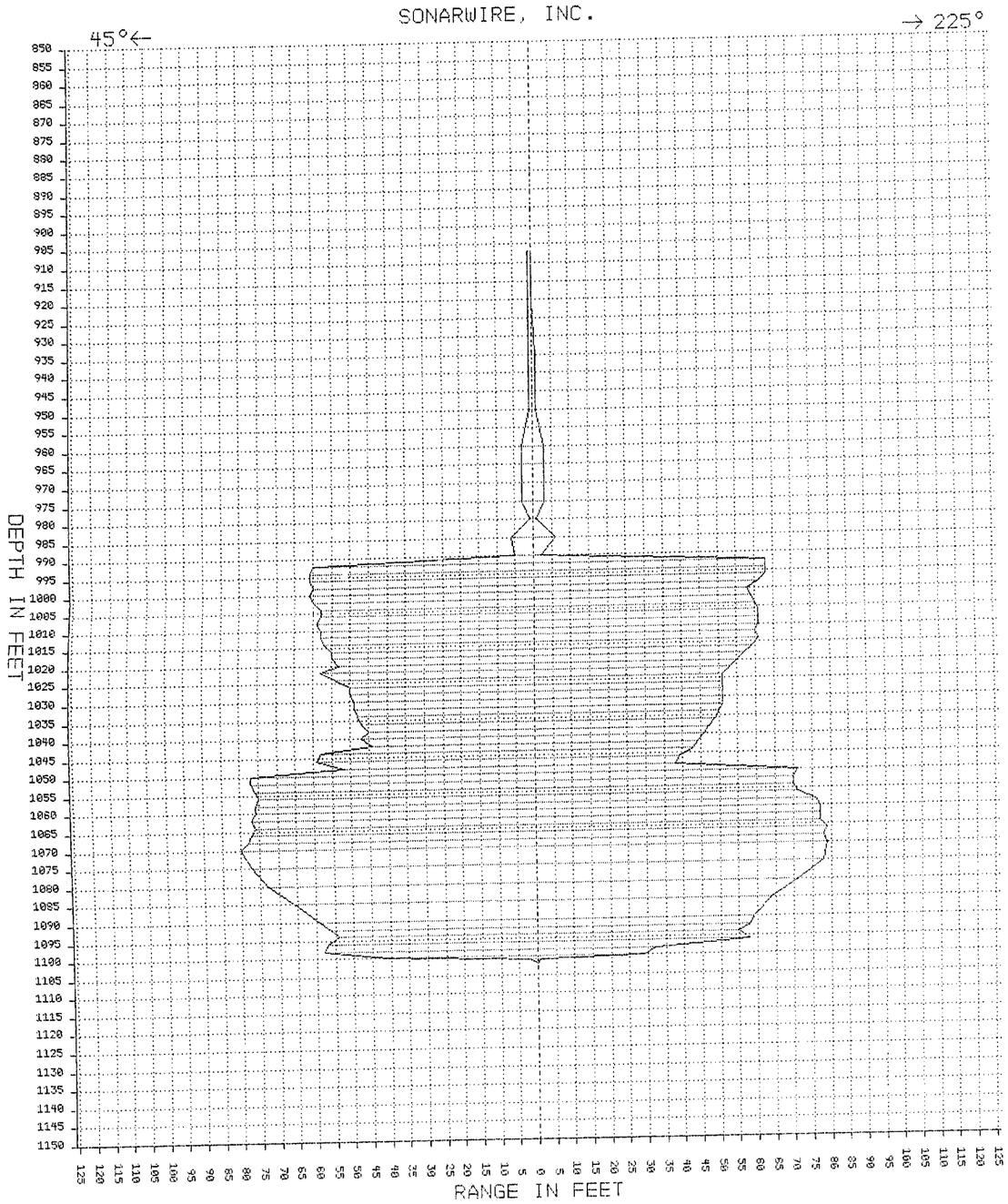
VERTICAL CROSS-SECTION
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 11
WED, MAR 1, 1995 9:08

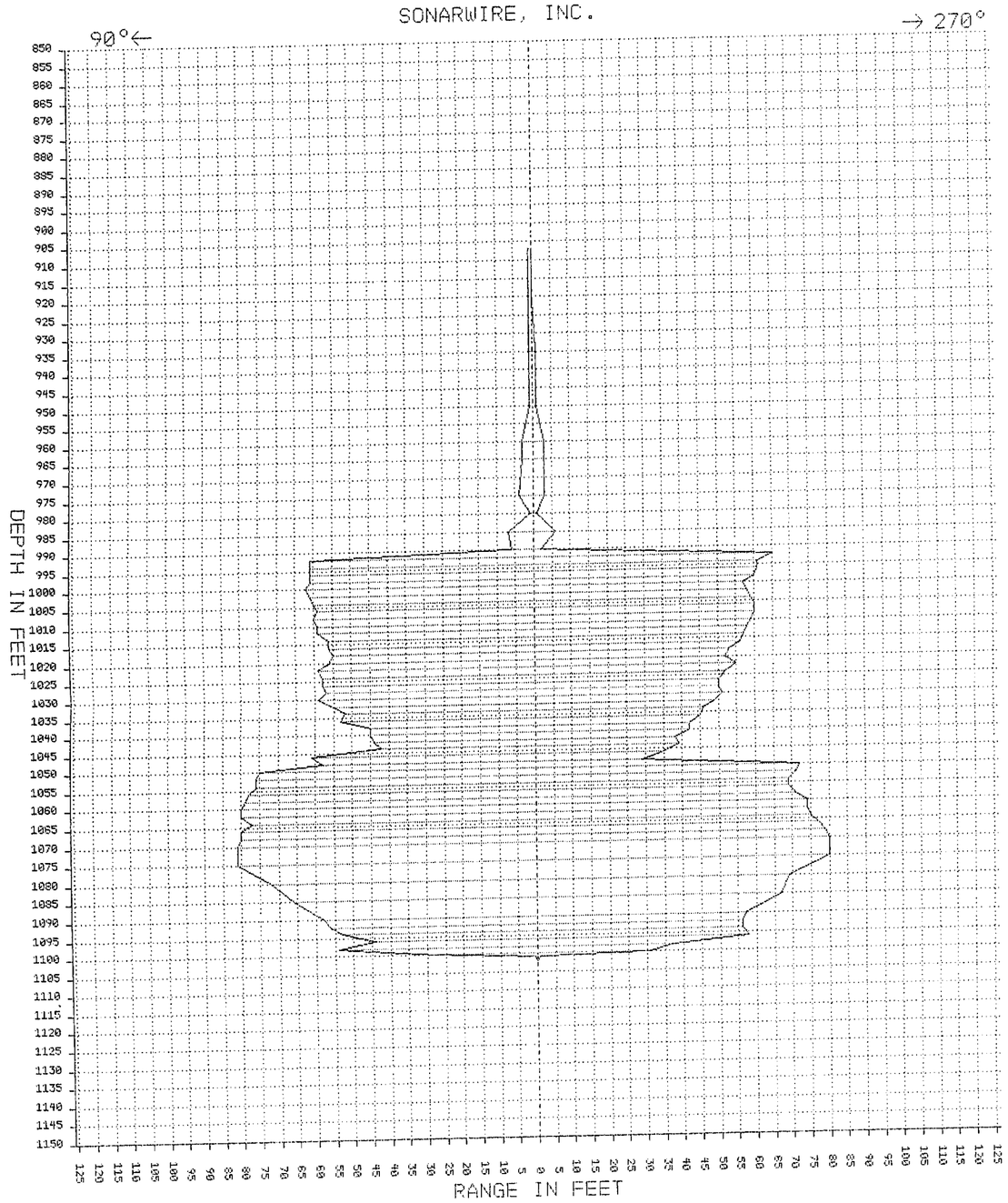
VERTICAL CROSS-SECTION
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 11
WED, MAR 1, 1995 9:08

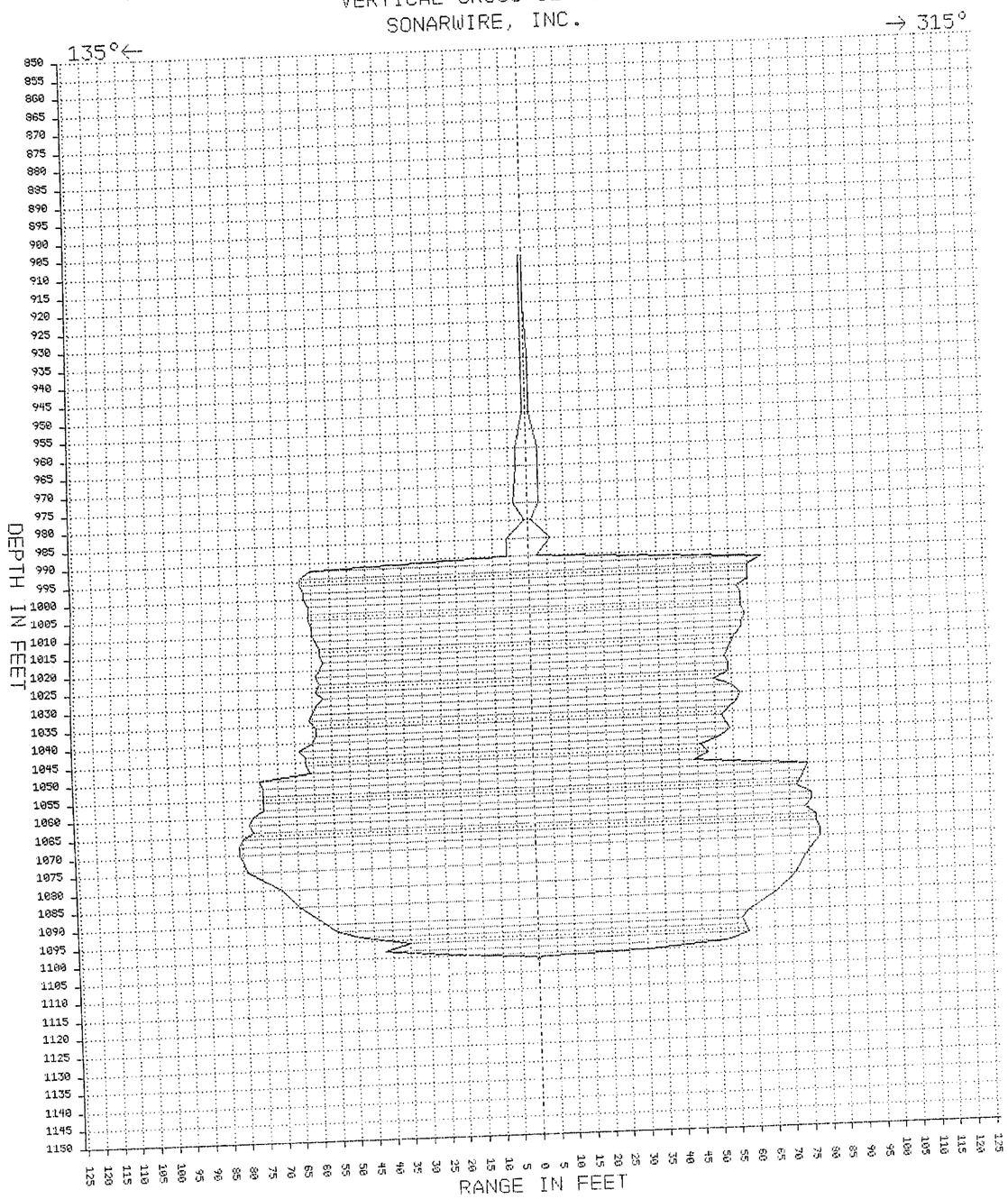
VERTICAL CROSS-SECTION
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 11
WED, MAR 1, 1995 9:08

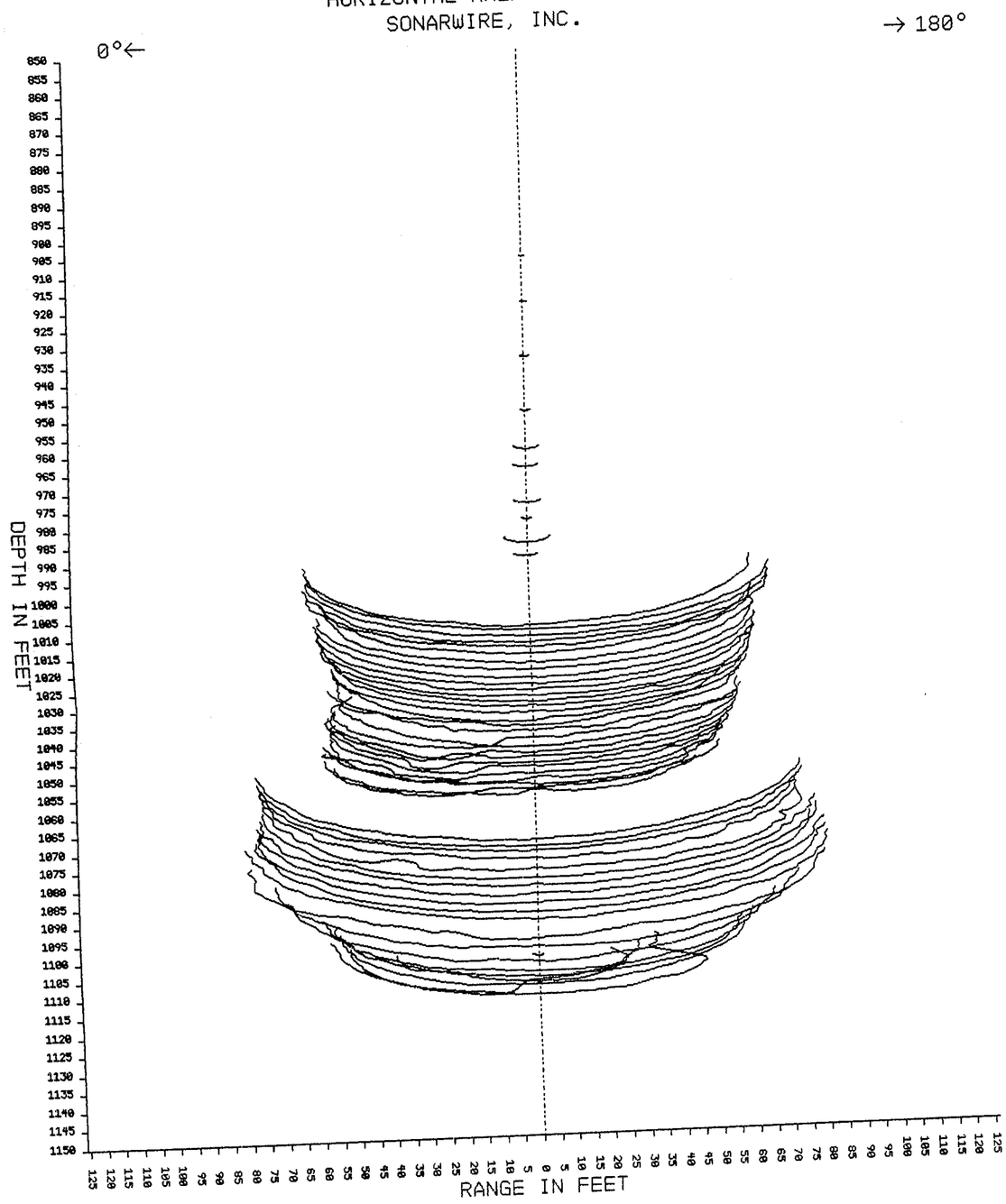
VERTICAL CROSS-SECTION
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 11
WED, MAR 1, 1995 9:08

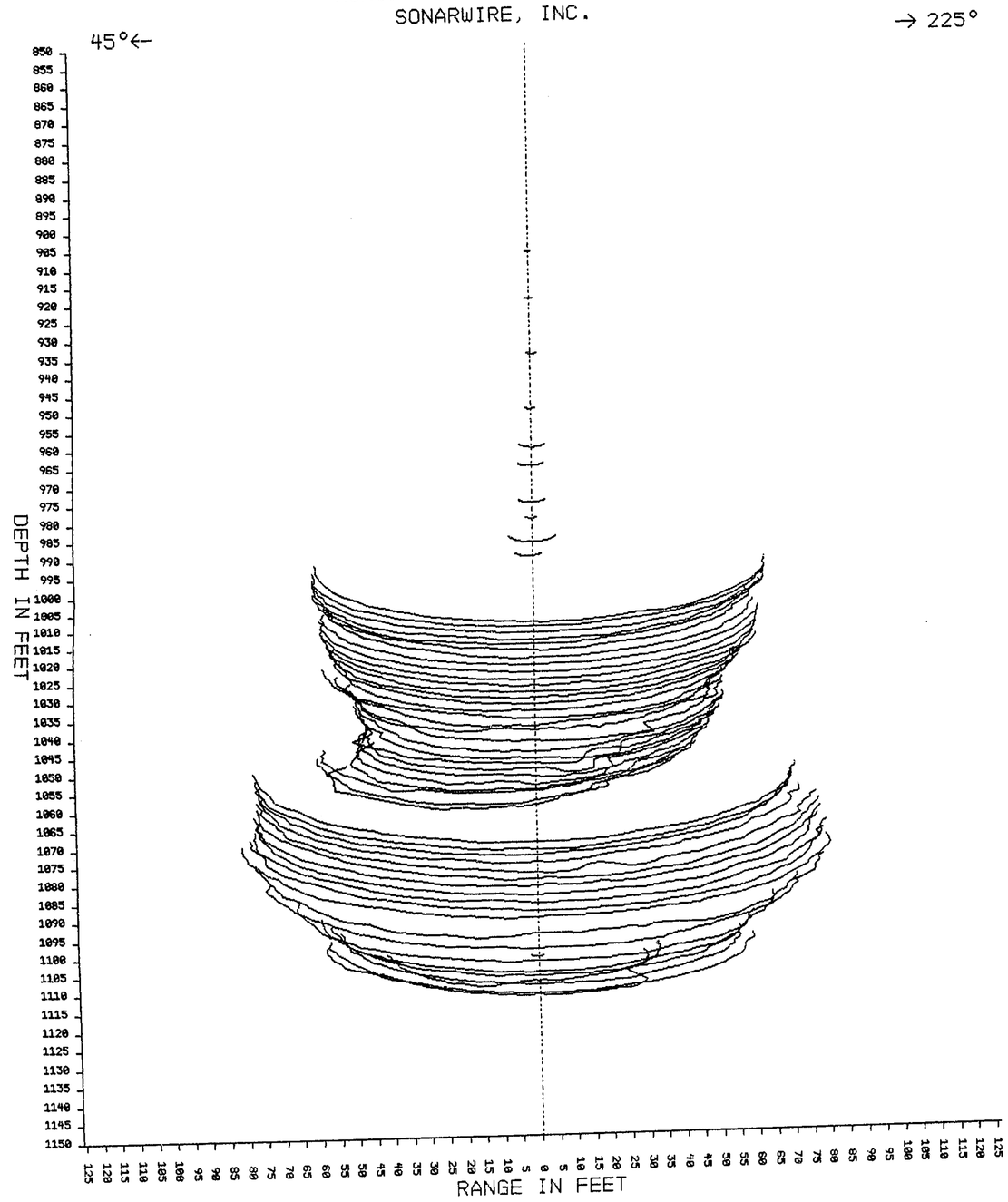
HORIZONTAL HALF-SECTIONS
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 11
WED, MAR 1, 1995 9:08

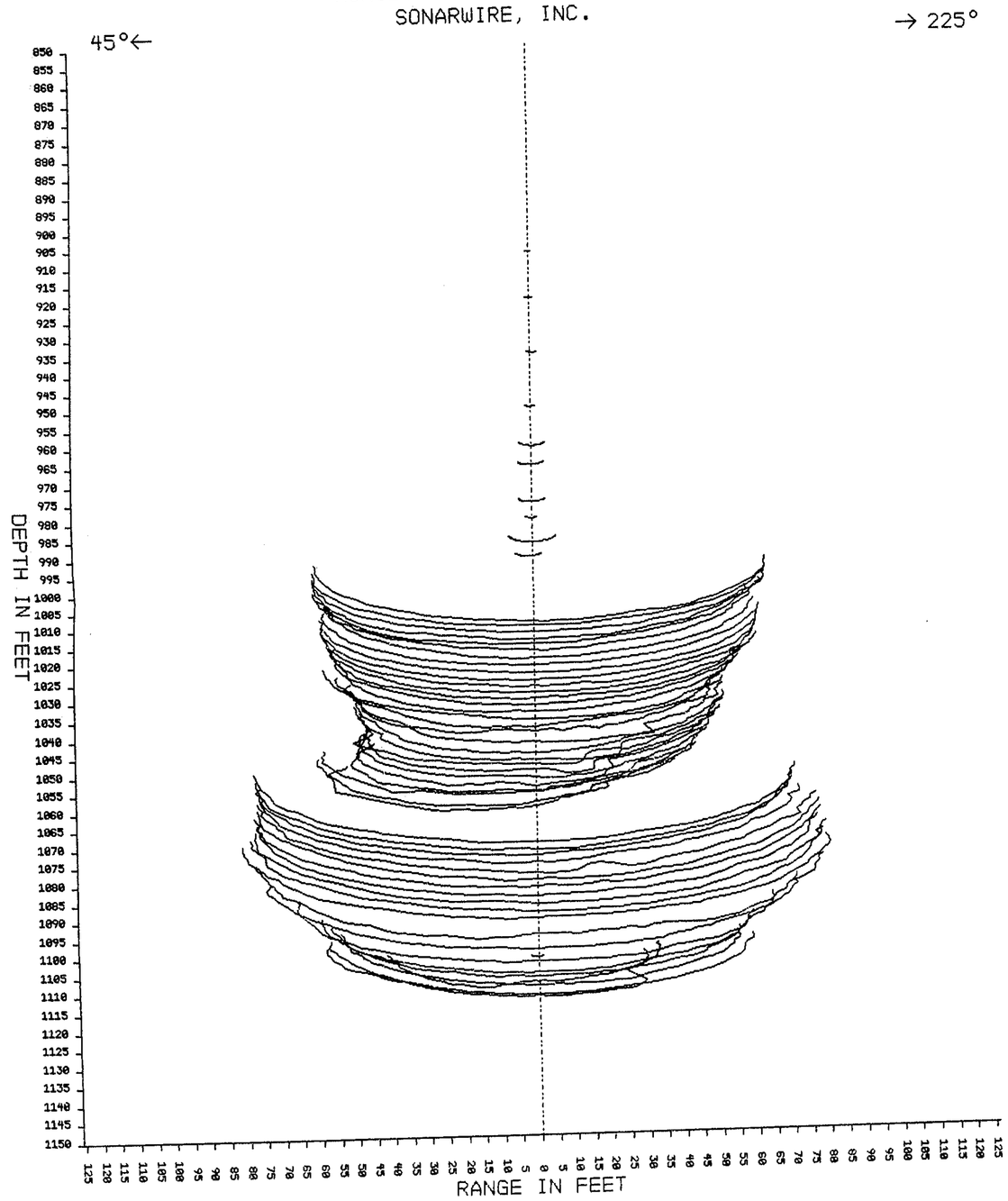
HORIZONTAL HALF-SECTIONS
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 11
WED, MAR 1, 1995 9:08

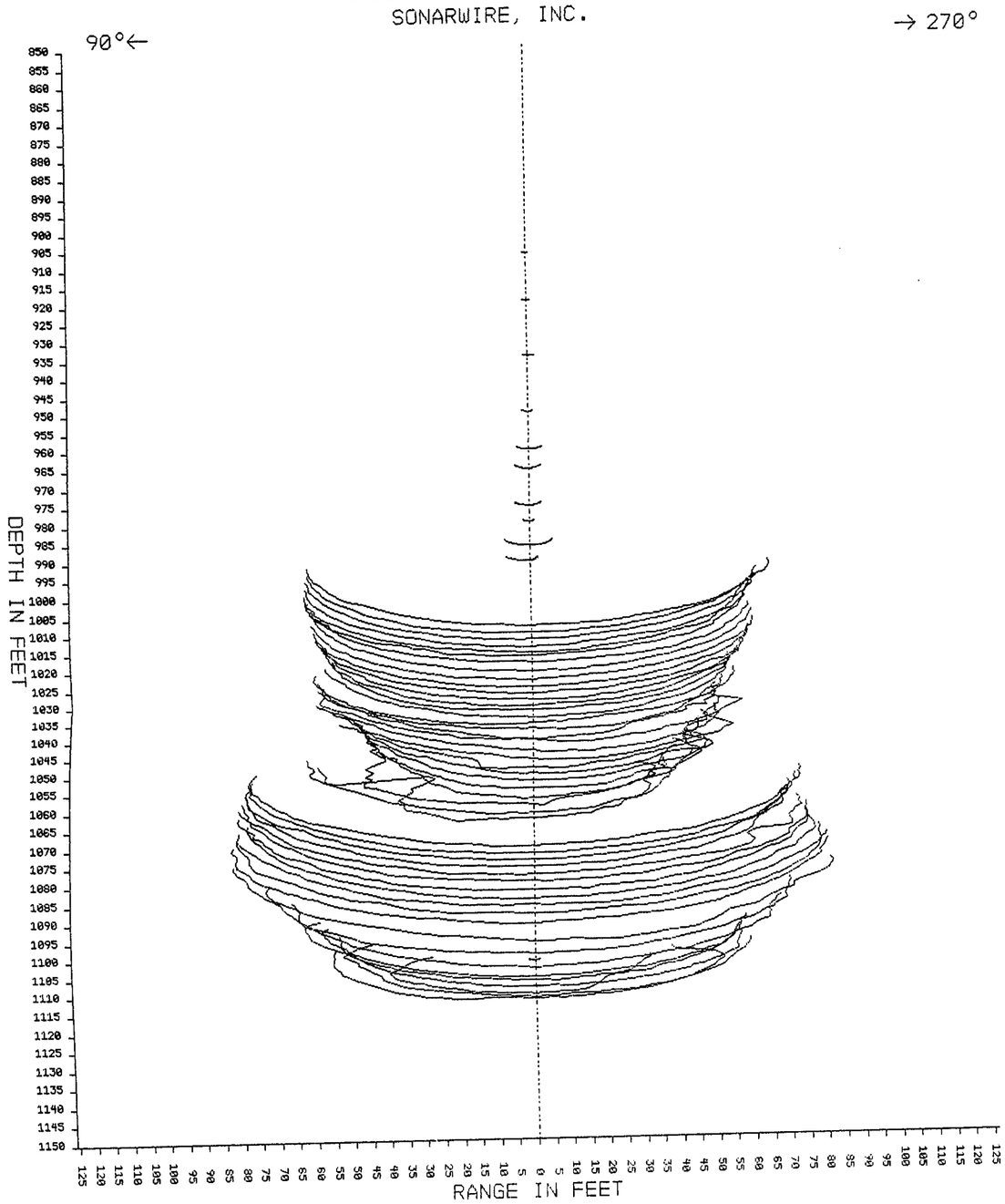
HORIZONTAL HALF-SECTIONS
SONARWIRE, INC.



FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 11
WED, MAR 1, 1995 9:08

HORIZONTAL HALF-SECTIONS
SONARWIRE, INC.

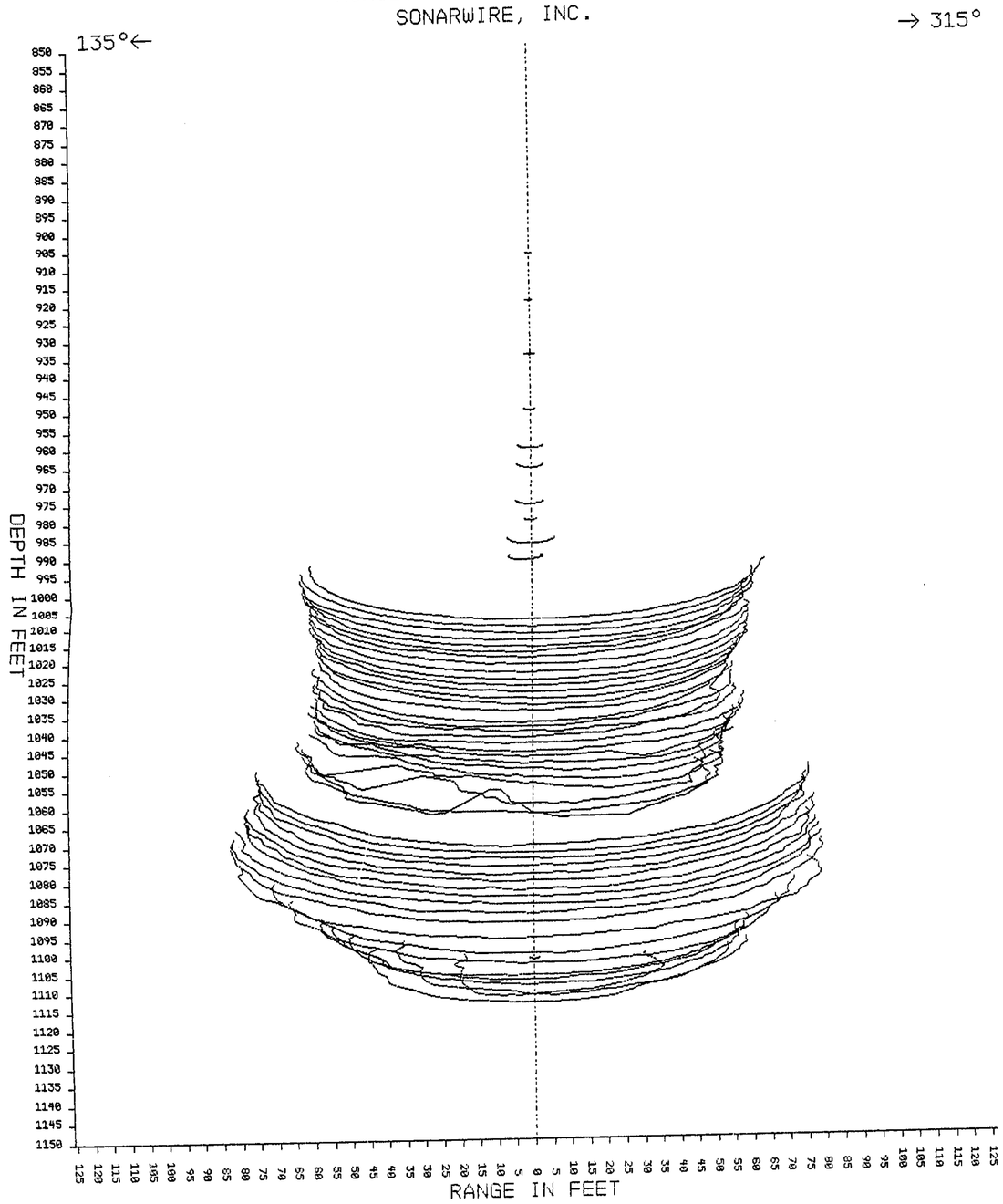



Ferrellgas, Inc.
NW Sec 8-T18N.

FERRELLGAS
HOLBROOK, AZ.

STORAGE WELL NO. 11
WED, MAR 1, 1995 9:08

HORIZONTAL HALF-SECTIONS
SONARWIRE, INC.



Wall Range versus Bearing and Depth
Sonarwire, Inc.
FERRELLGAS
STORAGE WELL NO. 11
Wed, Mar 1, 1995 9:08
HOLBROOK, AZ.

Depth: 907 Tilt: 0 Range: 24.8 VOS: 5984

| 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 | 0.9 |
| 22.5 | 0.9 | 0.9 | 1.2 | 0.9 | 1.2 | 1.2 | 1.2 | 1.2 |
| 45.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 67.5 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 90.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 112.5 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 135.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 157.5 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 180.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 0.9 | 0.9 | 0.9 |
| 202.5 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 225.0 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| 247.5 | 0.8 | 0.8 | 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 | - | - |

Depth: 920 Tilt: 0 Range: 24.8 VOS: 5984

| 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 | 0.9 | 0.9 | 0.9 | 0.9 | 1.2 | 1.2 | 1.3 |
| 45.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 67.5 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 90.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 112.5 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 135.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 157.5 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 180.0 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 0.9 |
| 202.5 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| 225.0 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| 247.5 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| 270.0 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| 292.5 | 0.9 | 0.9 | 0.9 | 0.9 | 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: 935 Tilt: 0 Range: 24.8 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 22.5 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 45.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 |
| 67.5 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 90.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 112.5 | 1.4 | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 135.0 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 157.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 180.0 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.7 | 1.7 | 1.7 |
| 202.5 | 1.7 | 1.7 | 1.8 | 1.8 | 1.8 | 1.9 | 1.9 | 1.9 |
| 225.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 247.5 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 270.0 | 1.9 | 1.9 | 1.7 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 |
| 292.5 | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 |
| 315.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 337.5 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 0.1 | 0.1 |

Depth: 950 Tilt: 0 Range: 24.8 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.6 | 1.6 | 1.6 |
| 22.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.7 | 1.7 |
| 45.0 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.8 | 1.8 | 1.8 |
| 67.5 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 90.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 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 | 1.9 | 1.9 | 1.8 | 1.8 | 1.8 |
| 180.0 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| 202.5 | 1.7 | 1.7 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 225.0 | 1.5 | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 247.5 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 270.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| 292.5 | 1.3 | 1.3 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 315.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 337.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Depth: 960 Tilt: 0 Range: 24.8 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 |
| 22.5 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 |
| 45.0 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 |
| 67.5 | 3.4 | 3.4 | 3.4 | 3.6 | 3.6 | 3.5 | 3.6 | 3.6 |
| 90.0 | 3.6 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| 112.5 | 3.6 | 3.6 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| 135.0 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.9 |
| 157.5 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.8 | 3.8 | 3.8 |
| 180.0 | 3.9 | 3.9 | 3.9 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 |
| 202.5 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 |
| 225.0 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.7 | 3.7 | 3.7 |
| 247.5 | 3.6 | 3.7 | 3.6 | 3.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| 270.0 | 3.7 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 |
| 292.5 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.5 | 3.5 | 3.5 |
| 315.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 337.5 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 |

Depth: 965 Tilt: 0 Range: 24.8 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 3.9 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 22.5 | 4.0 | 4.0 | 4.0 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 |
| 45.0 | 3.9 | 3.9 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.9 |
| 67.5 | 3.9 | 3.9 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 90.0 | 4.0 | 4.0 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 |
| 112.5 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 4.0 | 4.0 |
| 135.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 157.5 | 4.0 | 3.9 | 3.9 | 3.9 | 3.6 | 3.6 | 3.6 | 3.5 |
| 180.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| 202.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.4 | 3.4 | 3.4 | 3.4 |
| 225.0 | 3.4 | 3.4 | 3.4 | 3.5 | 3.4 | 3.4 | 3.4 | 3.4 |
| 247.5 | 3.4 | 3.4 | 3.4 | 3.4 | 3.2 | 3.2 | 3.2 | 3.2 |
| 270.0 | 3.4 | 3.4 | 3.4 | 3.4 | 3.2 | 3.4 | 3.4 | 3.4 |
| 292.5 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 |
| 315.0 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.5 |
| 337.5 | 3.5 | 3.6 | 3.6 | 3.6 | 3.7 | 3.7 | 3.8 | 3.8 |

Depth: 975 Tilt: 0 Range: 24.8 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| 22.5 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.8 | 3.8 |
| 45.0 | 3.8 | 3.9 | 3.9 | 3.9 | 4.0 | 4.0 | 4.0 | 4.1 |
| 67.5 | 4.2 | 4.2 | 4.2 | 4.0 | 4.0 | 4.1 | 4.1 | 4.1 |
| 90.0 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 112.5 | 4.1 | 4.1 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| 135.0 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 157.5 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.1 | 4.1 | 4.1 |
| 180.0 | 4.1 | 4.1 | 4.0 | 4.0 | 4.0 | 4.0 | 3.9 | 3.9 |
| 202.5 | 3.9 | 3.9 | 3.9 | 3.9 | 3.8 | 3.8 | 3.8 | 3.8 |
| 225.0 | 3.8 | 3.7 | 3.7 | 3.7 | 3.7 | 3.6 | 3.6 | 3.6 |
| 247.5 | 3.6 | 3.5 | 3.5 | 3.5 | 3.5 | 3.4 | 3.4 | 3.4 |
| 270.0 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 |
| 292.5 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 |
| 315.0 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.5 |
| 337.5 | 3.6 | 3.7 | 3.8 | 3.8 | 3.8 | 3.8 | 3.7 | 3.7 |

Depth: 980 Tilt: 0 Range: 24.8 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.8 | 1.8 | 1.8 |
| 22.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.9 | 1.9 | 1.9 | 1.9 |
| 45.0 | 1.9 | 1.9 | 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 | 1.9 | 1.9 | 1.9 | 1.9 |
| 135.0 | 1.8 | 1.8 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| 157.5 | 1.7 | 1.7 | 1.6 | 1.6 | 1.6 | 1.6 | 1.5 | 1.5 |
| 180.0 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 202.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 225.0 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 247.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 270.0 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 292.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 |
| 315.0 | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| 337.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.7 | 1.7 |

Depth: 985 Tilt: 0 Range: 24.8 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| 22.5 | 6.6 | 6.4 | 6.5 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 |
| 45.0 | 6.9 | 6.7 | 6.6 | 6.6 | 6.7 | 6.7 | 6.9 | 7.0 |
| 67.5 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.1 | 7.2 |
| 90.0 | 7.1 | 7.1 | 6.9 | 6.7 | 6.7 | 6.9 | 6.9 | 6.9 |
| 112.5 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |
| 135.0 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.7 | 6.7 | 6.7 |
| 157.5 | 6.7 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.5 | 6.5 |
| 180.0 | 6.5 | 6.5 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.5 |
| 202.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| 225.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| 247.5 | 6.5 | 6.4 | 6.5 | 6.5 | 6.5 | 6.4 | 6.3 | 6.3 |
| 270.0 | 6.4 | 6.3 | 6.4 | 6.3 | 6.4 | 6.4 | 6.4 | 6.4 |
| 292.5 | 6.4 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| 315.0 | 6.5 | 6.5 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.7 |
| 337.5 | 6.7 | 6.7 | 6.6 | 6.5 | 6.5 | 6.4 | 6.4 | 6.4 |

Depth: 990 Tilt: 0 Range: 24.8 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| 22.5 | 4.2 | 4.3 | 4.4 | 4.5 | 4.6 | 4.6 | 4.7 | 4.9 |
| 45.0 | 5.0 | 5.1 | 5.2 | 5.3 | 5.4 | 5.6 | 5.6 | 5.7 |
| 67.5 | 5.8 | 6.1 | 6.3 | 6.3 | 6.4 | 6.5 | 6.6 | 6.7 |
| 90.0 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |
| 112.5 | 6.9 | 6.9 | 6.9 | 6.7 | 6.6 | 6.5 | 6.2 | 6.2 |
| 135.0 | 6.2 | 6.0 | 5.9 | 5.8 | 5.6 | 5.1 | 4.9 | 4.6 |
| 157.5 | 4.4 | 4.2 | 3.6 | 3.4 | 3.2 | 3.1 | 3.0 | 2.8 |
| 180.0 | 2.7 | 2.6 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 202.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 225.0 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 247.5 | 2.5 | 2.4 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| 270.0 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 |
| 292.5 | 2.4 | 2.5 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| 315.0 | 2.6 | 2.6 | 2.7 | 2.8 | 3.0 | 3.1 | 3.2 | 3.4 |
| 337.5 | 3.5 | 3.5 | 3.6 | 3.7 | 3.7 | 3.7 | 4.0 | 4.2 |

Depth: 992 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 62.2 | 62.2 | 61.8 | 61.4 | 61.4 | 61.8 | 61.8 | 61.4 |
| 22.5 | 61.1 | 61.1 | 61.1 | 60.7 | 60.7 | 60.7 | 60.3 | 60.3 |
| 45.0 | 60.3 | 60.3 | 60.3 | 60.7 | 61.4 | 61.4 | 61.1 | 61.1 |
| 67.5 | 60.7 | 60.7 | 60.7 | 61.4 | 61.4 | 61.4 | 61.4 | 61.4 |
| 90.0 | 61.4 | 61.8 | 61.8 | 61.8 | 61.8 | 61.8 | 61.8 | 61.8 |
| 112.5 | 61.4 | 61.8 | 61.8 | 61.8 | 61.4 | 61.4 | 61.1 | 61.1 |
| 135.0 | 60.7 | 60.7 | 60.7 | 60.7 | 60.7 | 60.7 | 60.7 | 60.3 |
| 157.5 | 60.7 | 60.7 | 60.7 | 61.1 | 60.7 | 61.4 | 61.1 | 61.1 |
| 180.0 | 61.1 | 61.1 | 61.1 | 61.4 | 62.2 | 62.2 | 62.2 | 61.8 |
| 202.5 | 61.8 | 62.2 | 62.2 | 62.6 | 62.6 | 62.6 | 63.3 | 63.3 |
| 225.0 | 63.7 | 63.7 | 63.7 | 64.5 | 64.8 | 64.8 | 64.5 | 64.8 |
| 247.5 | 64.5 | 64.1 | 64.1 | 64.1 | 64.1 | 64.5 | 64.8 | 64.8 |
| 270.0 | 65.2 | 65.6 | 66.0 | 65.6 | 65.6 | 64.1 | 63.7 | 63.3 |
| 292.5 | 63.7 | 64.5 | 64.1 | 64.1 | 64.5 | 64.5 | 64.5 | 64.5 |
| 315.0 | 64.1 | 63.3 | 63.0 | 63.0 | 63.0 | 63.0 | 62.6 | 62.6 |
| 337.5 | 62.6 | 63.0 | 63.0 | 62.2 | 62.2 | 62.2 | 62.2 | 61.8 |

Depth: 994 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 61.4 | 61.4 | 62.2 | 62.6 | 62.2 | 62.2 | 61.8 | 61.4 |
| 22.5 | 61.4 | 61.8 | 61.8 | 61.8 | 61.8 | 61.1 | 60.7 | 60.7 |
| 45.0 | 61.1 | 60.7 | 60.7 | 60.3 | 60.3 | 60.7 | 60.7 | 60.7 |
| 67.5 | 61.1 | 61.1 | 60.7 | 60.7 | 61.1 | 61.1 | 61.1 | 61.4 |
| 90.0 | 61.4 | 61.4 | 61.4 | 61.4 | 61.8 | 61.4 | 61.8 | 62.2 |
| 112.5 | 62.6 | 62.6 | 62.6 | 63.0 | 63.3 | 63.3 | 63.3 | 63.3 |
| 135.0 | 63.3 | 63.0 | 63.3 | 63.7 | 64.1 | 64.5 | 64.8 | 65.2 |
| 157.5 | 64.8 | 65.2 | 65.6 | 66.0 | 66.0 | 66.0 | 65.6 | 66.0 |
| 180.0 | 66.4 | 66.0 | 66.0 | 66.0 | 66.0 | 66.0 | 65.6 | 65.2 |
| 202.5 | 64.8 | 65.2 | 65.2 | 64.8 | 64.1 | 64.5 | 64.5 | 63.7 |
| 225.0 | 63.7 | 63.7 | 63.7 | 63.3 | 63.0 | 63.0 | 63.0 | 63.0 |
| 247.5 | 62.6 | 62.6 | 62.6 | 62.6 | 62.6 | 62.6 | 62.2 | 61.8 |
| 270.0 | 61.8 | 61.4 | 61.4 | 61.4 | 61.4 | 61.4 | 61.1 | 60.7 |
| 292.5 | 60.3 | 60.7 | 60.7 | 60.7 | 61.1 | 60.7 | 60.3 | 60.3 |
| 315.0 | 60.3 | 60.7 | 60.7 | 61.1 | 60.7 | 60.7 | 60.7 | 61.1 |
| 337.5 | 61.4 | 61.4 | 61.1 | 61.1 | 61.4 | 61.8 | 61.4 | 61.4 |

Depth: 996 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 61.4 | 62.2 | 62.2 | 62.6 | 62.2 | 61.8 | 61.8 | 61.8 |
| 22.5 | 62.2 | 61.4 | 61.1 | 61.4 | 61.1 | 61.4 | 61.4 | 61.1 |
| 45.0 | 61.1 | 61.1 | 61.1 | 60.7 | 60.7 | 60.7 | 60.7 | 60.7 |
| 67.5 | 60.7 | 61.1 | 61.1 | 61.1 | 61.4 | 61.8 | 61.4 | 61.4 |
| 90.0 | 61.8 | 62.2 | 62.2 | 62.6 | 62.2 | 63.0 | 63.3 | 63.7 |
| 112.5 | 64.1 | 63.7 | 64.5 | 64.1 | 63.7 | 63.3 | 63.3 | 63.7 |
| 135.0 | 63.7 | 64.1 | 64.1 | 64.1 | 64.5 | 64.5 | 64.8 | 65.6 |
| 157.5 | 65.2 | 65.6 | 64.8 | 64.5 | 64.8 | 65.6 | 66.0 | 65.6 |
| 180.0 | 65.6 | 66.4 | 66.0 | 66.7 | 66.0 | 66.0 | 65.6 | 65.6 |
| 202.5 | 64.8 | 64.5 | 64.5 | 64.8 | 63.7 | 63.7 | 63.7 | 64.1 |
| 225.0 | 63.3 | 63.3 | 63.7 | 63.7 | 63.7 | 63.3 | 63.0 | 62.2 |
| 247.5 | 61.4 | 61.8 | 61.8 | 62.2 | 62.2 | 62.6 | 61.8 | 61.1 |
| 270.0 | 61.1 | 61.8 | 61.1 | 60.7 | 60.7 | 60.7 | 61.4 | 61.1 |
| 292.5 | 61.4 | 60.3 | 60.7 | 61.1 | 60.7 | 59.9 | 60.3 | 60.3 |
| 315.0 | 60.3 | 60.7 | 60.7 | 60.7 | 60.7 | 60.3 | 60.3 | 60.3 |
| 337.5 | 60.3 | 60.7 | 61.1 | 61.1 | 61.8 | 61.8 | 61.8 | 61.8 |

Depth: 998 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 62.6 | 62.2 | 62.2 | 62.2 | 62.2 | 61.1 | 61.4 | 61.4 |
| 22.5 | 61.1 | 61.4 | 60.7 | 60.3 | 60.7 | 61.1 | 60.7 | 60.7 |
| 45.0 | 60.3 | 60.3 | 60.7 | 60.7 | 61.1 | 61.1 | 61.1 | 61.1 |
| 67.5 | 61.1 | 61.1 | 61.4 | 61.8 | 61.8 | 61.8 | 61.8 | 61.8 |
| 90.0 | 61.8 | 61.8 | 62.2 | 62.2 | 62.6 | 62.2 | 62.2 | 62.2 |
| 112.5 | 62.2 | 63.0 | 62.6 | 62.6 | 62.6 | 63.0 | 63.3 | 63.0 |
| 135.0 | 63.0 | 63.3 | 63.7 | 63.7 | 63.7 | 63.7 | 64.1 | 64.1 |
| 157.5 | 63.7 | 63.7 | 64.1 | 65.6 | 66.0 | 66.0 | 65.6 | 65.6 |
| 180.0 | 65.6 | 66.0 | 65.6 | 66.0 | 66.4 | 65.2 | 64.8 | 64.8 |
| 202.5 | 64.5 | 64.1 | 64.1 | 63.7 | 62.6 | 61.8 | 61.8 | 61.4 |
| 225.0 | 61.8 | 62.6 | 61.4 | 61.1 | 61.1 | 61.1 | 61.1 | 59.6 |
| 247.5 | 59.2 | 58.8 | 59.2 | 59.6 | 58.8 | 59.2 | 59.2 | 59.6 |
| 270.0 | 60.7 | 60.7 | 59.9 | 59.6 | 59.6 | 60.3 | 60.3 | 60.3 |
| 292.5 | 60.7 | 61.1 | 60.3 | 59.9 | 59.9 | 60.3 | 59.6 | 59.9 |
| 315.0 | 60.3 | 60.7 | 60.7 | 60.7 | 59.9 | 59.2 | 59.2 | 58.8 |
| 337.5 | 59.6 | 60.3 | 59.6 | 59.9 | 61.1 | 61.8 | 61.8 | 61.8 |

Depth: 1000 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 61.4 | 61.8 | 61.1 | 60.7 | 60.7 | 60.7 | 59.9 | 60.3 |
| 22.5 | 60.7 | 61.1 | 60.7 | 61.1 | 60.7 | 60.7 | 61.1 | 61.1 |
| 45.0 | 61.1 | 60.7 | 60.7 | 61.1 | 61.1 | 61.1 | 61.1 | 61.4 |
| 67.5 | 61.8 | 61.8 | 62.2 | 61.4 | 61.8 | 62.6 | 62.2 | 62.2 |
| 90.0 | 62.2 | 62.2 | 62.2 | 62.6 | 62.2 | 61.4 | 61.4 | 61.4 |
| 112.5 | 61.8 | 61.4 | 61.4 | 60.3 | 61.8 | 63.0 | 63.0 | 63.0 |
| 135.0 | 62.6 | 62.6 | 62.6 | 62.2 | 61.8 | 61.4 | 61.4 | 61.8 |
| 157.5 | 62.6 | 63.0 | 63.3 | 63.3 | 63.3 | 62.6 | 62.6 | 62.2 |
| 180.0 | 61.4 | 61.4 | 61.4 | 61.1 | 60.7 | 61.1 | 61.1 | 61.4 |
| 202.5 | 61.1 | 61.1 | 61.4 | 61.4 | 61.1 | 61.1 | 59.2 | 58.4 |
| 225.0 | 58.1 | 58.4 | 58.8 | 58.4 | 58.4 | 58.4 | 58.1 | 58.1 |
| 247.5 | 58.4 | 58.4 | 58.4 | 58.4 | 58.8 | 57.7 | 57.7 | 57.7 |
| 270.0 | 57.7 | 57.3 | 56.9 | 56.9 | 56.9 | 56.9 | 56.9 | 56.9 |
| 292.5 | 56.9 | 56.9 | 57.7 | 58.1 | 58.8 | 58.8 | 58.8 | 57.7 |
| 315.0 | 57.7 | 57.7 | 58.4 | 58.8 | 59.2 | 58.8 | 58.8 | 59.6 |
| 337.5 | 59.2 | 59.6 | 59.9 | 61.1 | 61.8 | 61.4 | 61.8 | 61.4 |

Depth: 1002 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 58.4 | 58.1 | 58.4 | 58.4 | 58.8 | 58.4 | 58.1 | 59.2 |
| 22.5 | 59.9 | 59.2 | 58.1 | 57.7 | 58.4 | 57.3 | 58.1 | 59.2 |
| 45.0 | 60.3 | 60.3 | 60.3 | 60.3 | 59.9 | 60.7 | 60.3 | 61.1 |
| 67.5 | 61.1 | 60.7 | 60.7 | 61.4 | 61.8 | 61.4 | 61.8 | 61.8 |
| 90.0 | 61.4 | 61.4 | 61.4 | 61.4 | 61.8 | 62.2 | 61.8 | 62.2 |
| 112.5 | 61.4 | 61.8 | 61.8 | 60.7 | 60.3 | 60.7 | 61.4 | 61.8 |
| 135.0 | 61.8 | 62.2 | 62.6 | 61.1 | 59.9 | 59.9 | 59.9 | 60.3 |
| 157.5 | 59.9 | 59.6 | 59.6 | 59.9 | 60.3 | 61.1 | 61.1 | 61.1 |
| 180.0 | 61.1 | 60.7 | 61.1 | 60.7 | 61.1 | 60.7 | 60.3 | 60.3 |
| 202.5 | 59.6 | 59.2 | 59.6 | 59.9 | 59.2 | 58.8 | 58.1 | 58.8 |
| 225.0 | 59.2 | 59.6 | 59.6 | 58.8 | 58.1 | 57.7 | 57.3 | 58.1 |
| 247.5 | 57.7 | 58.1 | 58.1 | 58.1 | 57.7 | 57.7 | 58.4 | 58.1 |
| 270.0 | 58.4 | 58.1 | 58.1 | 57.7 | 58.1 | 57.7 | 56.9 | 56.9 |
| 292.5 | 56.5 | 57.3 | 56.9 | 58.4 | 58.1 | 58.1 | 58.4 | 58.8 |
| 315.0 | 58.1 | 57.3 | 57.7 | 57.7 | 56.9 | 56.5 | 57.3 | 57.7 |
| 337.5 | 57.7 | 56.9 | 56.5 | 56.9 | 57.3 | 57.3 | 57.3 | 58.1 |

Depth: 1004 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 56.9 | 56.2 | 56.5 | 56.9 | 56.9 | 56.9 | 56.9 | 57.3 |
| 22.5 | 56.5 | 56.5 | 57.3 | 57.3 | 57.7 | 57.3 | 56.9 | 56.9 |
| 45.0 | 58.1 | 57.7 | 57.7 | 58.1 | 58.1 | 58.1 | 58.1 | 58.1 |
| 67.5 | 58.1 | 58.1 | 58.1 | 57.3 | 59.2 | 59.9 | 60.3 | 60.3 |
| 90.0 | 60.3 | 59.9 | 60.3 | 60.7 | 59.9 | 59.9 | 60.3 | 60.3 |
| 112.5 | 59.6 | 59.9 | 60.7 | 60.3 | 60.3 | 60.7 | 61.1 | 61.1 |
| 135.0 | 61.1 | 60.7 | 61.1 | 61.1 | 60.7 | 61.4 | 60.7 | 61.1 |
| 157.5 | 61.1 | 60.7 | 60.7 | 60.3 | 60.7 | 60.7 | 61.1 | 61.4 |
| 180.0 | 61.1 | 61.4 | 62.2 | 61.8 | 61.4 | 60.3 | 60.7 | 60.3 |
| 202.5 | 59.6 | 60.3 | 60.7 | 60.3 | 60.7 | 60.3 | 60.3 | 60.3 |
| 225.0 | 60.3 | 60.3 | 59.6 | 59.6 | 59.9 | 59.9 | 60.3 | 59.6 |
| 247.5 | 59.6 | 58.8 | 59.2 | 60.3 | 60.3 | 60.3 | 59.9 | 59.9 |
| 270.0 | 59.6 | 59.9 | 59.2 | 58.8 | 58.8 | 58.8 | 58.4 | 58.4 |
| 292.5 | 58.1 | 58.4 | 58.8 | 58.8 | 58.8 | 59.2 | 58.4 | 58.4 |
| 315.0 | 58.4 | 59.6 | 59.6 | 58.8 | 58.4 | 58.8 | 58.4 | 57.7 |
| 337.5 | 56.9 | 56.5 | 56.5 | 56.2 | 56.5 | 56.5 | 56.9 | 56.5 |

Depth: 1006 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 58.8 | 58.8 | 58.8 | 58.8 | 58.8 | 59.6 | 58.8 | 59.2 |
| 22.5 | 58.8 | 58.1 | 58.4 | 58.8 | 58.8 | 58.8 | 58.8 | 58.4 |
| 45.0 | 58.1 | 58.1 | 58.4 | 58.1 | 58.8 | 58.8 | 58.4 | 58.1 |
| 67.5 | 58.4 | 58.1 | 58.8 | 58.4 | 58.8 | 59.2 | 59.2 | 59.6 |
| 90.0 | 59.6 | 59.6 | 59.9 | 60.3 | 60.7 | 60.3 | 59.9 | 59.9 |
| 112.5 | 60.3 | 60.7 | 60.7 | 61.1 | 61.1 | 60.7 | 61.4 | 60.7 |
| 135.0 | 61.1 | 61.1 | 61.4 | 61.1 | 61.4 | 61.4 | 61.1 | 61.1 |
| 157.5 | 61.8 | 61.8 | 61.8 | 62.6 | 63.0 | 62.2 | 62.2 | 61.8 |
| 180.0 | 61.4 | 61.1 | 61.1 | 61.1 | 61.4 | 61.1 | 61.8 | 61.8 |
| 202.5 | 62.2 | 61.8 | 61.4 | 61.8 | 61.8 | 62.2 | 62.2 | 61.8 |
| 225.0 | 61.8 | 61.8 | 61.8 | 61.8 | 61.1 | 60.7 | 60.7 | 60.7 |
| 247.5 | 60.7 | 60.7 | 60.7 | 60.3 | 59.9 | 60.3 | 59.9 | 59.9 |
| 270.0 | 60.3 | 60.3 | 59.9 | 59.9 | 59.9 | 59.2 | 59.2 | 59.6 |
| 292.5 | 59.6 | 59.6 | 59.6 | 59.6 | 59.2 | 59.2 | 58.8 | 59.2 |
| 315.0 | 58.8 | 59.2 | 59.6 | 58.8 | 58.8 | 58.8 | 59.2 | 59.2 |
| 337.5 | 59.2 | 59.2 | 58.8 | 59.6 | 59.6 | 59.6 | 58.4 | 58.8 |

Depth: 1008 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 59.9 | 59.9 | 59.9 | 59.6 | 59.2 | 59.2 | 59.2 | 59.9 |
| 22.5 | 59.9 | 59.6 | 59.2 | 59.2 | 58.8 | 59.2 | 58.8 | 58.4 |
| 45.0 | 59.2 | 59.2 | 58.8 | 58.8 | 59.2 | 58.8 | 59.6 | 59.6 |
| 67.5 | 59.6 | 59.2 | 59.2 | 59.2 | 59.2 | 59.6 | 59.6 | 59.9 |
| 90.0 | 60.3 | 60.3 | 60.3 | 59.9 | 59.2 | 59.6 | 60.7 | 61.1 |
| 112.5 | 60.7 | 60.3 | 60.7 | 60.7 | 60.7 | 60.7 | 60.3 | 61.1 |
| 135.0 | 60.7 | 60.3 | 60.7 | 60.7 | 60.7 | 61.4 | 61.8 | 61.8 |
| 157.5 | 61.4 | 61.8 | 61.1 | 61.1 | 61.1 | 61.8 | 61.8 | 61.8 |
| 180.0 | 61.8 | 62.2 | 61.8 | 61.4 | 61.1 | 61.4 | 61.4 | 61.4 |
| 202.5 | 61.8 | 61.8 | 61.4 | 61.4 | 61.1 | 61.4 | 61.4 | 61.4 |
| 225.0 | 61.4 | 61.4 | 61.4 | 61.8 | 61.4 | 61.4 | 61.1 | 61.1 |
| 247.5 | 60.7 | 60.7 | 60.7 | 61.1 | 61.1 | 60.7 | 60.7 | 61.1 |
| 270.0 | 60.7 | 60.7 | 60.7 | 61.1 | 60.3 | 60.3 | 60.3 | 60.3 |
| 292.5 | 59.9 | 59.6 | 59.2 | 59.6 | 59.2 | 59.6 | 59.6 | 59.6 |
| 315.0 | 59.2 | 59.2 | 59.2 | 59.2 | 59.2 | 58.4 | 58.8 | 59.2 |
| 337.5 | 58.8 | 59.2 | 58.8 | 59.2 | 59.2 | 59.2 | 59.6 | 59.2 |

Depth: 1010 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 58.8 | 59.6 | 59.6 | 59.6 | 59.6 | 59.6 | 59.2 | 59.2 |
| 22.5 | 59.2 | 58.8 | 58.4 | 58.4 | 58.8 | 59.2 | 59.2 | 58.8 |
| 45.0 | 58.8 | 58.8 | 58.8 | 58.8 | 59.2 | 58.8 | 58.8 | 59.6 |
| 67.5 | 59.6 | 59.6 | 59.6 | 59.2 | 59.2 | 59.6 | 59.6 | 59.6 |
| 90.0 | 59.9 | 59.6 | 59.6 | 59.9 | 59.6 | 59.9 | 60.3 | 60.7 |
| 112.5 | 60.3 | 60.3 | 59.9 | 59.9 | 59.9 | 60.7 | 60.7 | 61.1 |
| 135.0 | 60.7 | 61.4 | 61.1 | 61.8 | 62.2 | 61.8 | 62.2 | 61.8 |
| 157.5 | 61.8 | 61.4 | 61.8 | 61.4 | 61.8 | 62.2 | 61.8 | 61.8 |
| 180.0 | 61.4 | 61.4 | 61.8 | 61.8 | 61.1 | 61.4 | 61.4 | 60.7 |
| 202.5 | 61.1 | 61.4 | 61.8 | 61.1 | 61.4 | 61.1 | 61.1 | 60.7 |
| 225.0 | 61.1 | 61.1 | 60.7 | 61.1 | 61.1 | 61.1 | 60.3 | 60.3 |
| 247.5 | 60.7 | 61.1 | 60.7 | 60.3 | 60.3 | 60.3 | 59.9 | 59.9 |
| 270.0 | 59.6 | 59.2 | 59.6 | 59.9 | 59.9 | 59.6 | 58.8 | 59.2 |
| 292.5 | 59.6 | 59.6 | 59.2 | 59.2 | 58.8 | 58.4 | 58.8 | 58.4 |
| 315.0 | 58.8 | 58.8 | 59.2 | 58.8 | 59.6 | 59.6 | 59.2 | 58.8 |
| 337.5 | 58.8 | 58.8 | 58.8 | 58.8 | 58.8 | 59.2 | 59.2 | 58.8 |

Depth: 1012 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 59.2 | 58.8 | 59.2 | 58.8 | 58.8 | 58.8 | 58.8 | 58.4 |
| 22.5 | 58.4 | 58.4 | 58.4 | 58.4 | 58.1 | 58.1 | 58.4 | 58.4 |
| 45.0 | 58.4 | 58.1 | 58.1 | 58.1 | 58.1 | 57.7 | 58.4 | 58.8 |
| 67.5 | 58.4 | 58.4 | 58.4 | 58.8 | 58.4 | 58.8 | 58.8 | 59.2 |
| 90.0 | 59.2 | 59.2 | 58.8 | 58.4 | 58.4 | 59.2 | 59.6 | 59.9 |
| 112.5 | 60.3 | 59.9 | 59.6 | 59.9 | 59.6 | 58.4 | 59.2 | 59.9 |
| 135.0 | 59.9 | 59.6 | 59.6 | 59.2 | 60.3 | 61.4 | 61.8 | 61.1 |
| 157.5 | 60.7 | 60.7 | 61.1 | 61.1 | 61.4 | 61.4 | 61.4 | 61.4 |
| 180.0 | 61.8 | 61.4 | 61.4 | 61.4 | 59.2 | 59.9 | 60.7 | 60.3 |
| 202.5 | 60.3 | 60.7 | 60.7 | 61.1 | 61.1 | 61.1 | 60.7 | 61.1 |
| 225.0 | 60.7 | 60.3 | 60.3 | 60.3 | 60.3 | 59.9 | 59.9 | 60.3 |
| 247.5 | 60.7 | 59.9 | 60.3 | 59.6 | 59.2 | 58.4 | 58.8 | 58.1 |
| 270.0 | 58.8 | 58.8 | 58.8 | 58.8 | 59.2 | 59.2 | 59.6 | 59.9 |
| 292.5 | 59.9 | 59.9 | 59.9 | 57.7 | 57.7 | 58.4 | 58.4 | 58.8 |
| 315.0 | 58.4 | 58.8 | 59.2 | 58.8 | 58.4 | 58.1 | 58.4 | 58.4 |
| 337.5 | 58.8 | 58.8 | 59.2 | 58.8 | 58.4 | 58.1 | 58.4 | 58.8 |

Depth: 1014 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 57.7 | 56.9 | 57.3 | 57.7 | 57.7 | 57.7 | 57.3 | 57.7 |
| 22.5 | 56.9 | 57.7 | 57.7 | 57.7 | 57.3 | 57.3 | 57.3 | 57.3 |
| 45.0 | 57.3 | 57.3 | 57.3 | 56.9 | 55.8 | 56.2 | 56.5 | 56.9 |
| 67.5 | 56.5 | 56.9 | 56.5 | 56.2 | 56.5 | 56.9 | 56.9 | 56.5 |
| 90.0 | 56.9 | 56.9 | 57.3 | 57.7 | 57.7 | 57.3 | 57.7 | 57.7 |
| 112.5 | 58.4 | 58.8 | 59.2 | 59.6 | 59.2 | 59.2 | 59.2 | 58.4 |
| 135.0 | 58.8 | 58.8 | 59.2 | 58.8 | 58.8 | 58.8 | 59.2 | 59.6 |
| 157.5 | 59.9 | 60.3 | 60.7 | 60.3 | 59.9 | 60.3 | 59.9 | 60.3 |
| 180.0 | 59.9 | 60.7 | 60.7 | 59.9 | 60.3 | 60.3 | 60.3 | 61.1 |
| 202.5 | 61.1 | 61.4 | 61.8 | 62.2 | 62.2 | 62.2 | 61.4 | 61.4 |
| 225.0 | 61.1 | 60.7 | 60.3 | 60.3 | 59.9 | 59.6 | 59.2 | 59.6 |
| 247.5 | 59.2 | 59.2 | 58.8 | 59.2 | 58.4 | 57.3 | 57.7 | 58.1 |
| 270.0 | 57.7 | 57.3 | 57.7 | 57.7 | 58.1 | 58.4 | 58.1 | 57.7 |
| 292.5 | 58.1 | 57.7 | 58.1 | 58.1 | 57.7 | 57.7 | 56.9 | 56.5 |
| 315.0 | 56.5 | 56.5 | 57.3 | 57.3 | 57.3 | 57.3 | 57.3 | 58.1 |
| 337.5 | 57.7 | 57.3 | 57.7 | 58.4 | 58.4 | 58.4 | 58.4 | 57.7 |

Depth: 1016 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 56.9 | 57.3 | 56.9 | 57.3 | 56.9 | 57.3 | 56.9 | 56.2 |
| 22.5 | 56.9 | 56.5 | 56.5 | 56.5 | 55.8 | 56.5 | 56.5 | 55.8 |
| 45.0 | 55.4 | 55.0 | 55.0 | 55.0 | 55.8 | 55.8 | 55.4 | 55.0 |
| 67.5 | 55.4 | 55.8 | 56.2 | 56.2 | 56.2 | 56.2 | 56.2 | 56.5 |
| 90.0 | 56.5 | 56.2 | 56.9 | 57.7 | 58.4 | 58.8 | 58.8 | 59.2 |
| 112.5 | 59.6 | 59.2 | 58.8 | 59.2 | 58.4 | 59.2 | 59.2 | 59.2 |
| 135.0 | 58.8 | 58.8 | 58.8 | 59.6 | 58.8 | 59.2 | 59.6 | 60.3 |
| 157.5 | 60.3 | 60.3 | 60.3 | 59.6 | 58.8 | 59.6 | 59.9 | 60.3 |
| 180.0 | 60.3 | 60.3 | 60.3 | 60.7 | 60.7 | 60.3 | 60.3 | 60.7 |
| 202.5 | 60.3 | 60.3 | 59.6 | 59.6 | 58.8 | 57.7 | 58.1 | 58.4 |
| 225.0 | 59.2 | 59.2 | 58.4 | 55.8 | 55.8 | 55.4 | 56.2 | 56.5 |
| 247.5 | 56.5 | 56.9 | 56.9 | 56.5 | 56.2 | 56.5 | 56.5 | 56.5 |
| 270.0 | 56.5 | 56.2 | 55.8 | 56.2 | 55.8 | 55.8 | 56.2 | 56.2 |
| 292.5 | 55.4 | 55.0 | 54.3 | 54.3 | 54.3 | 54.7 | 54.3 | 54.7 |
| 315.0 | 55.0 | 55.4 | 55.8 | 55.8 | 55.8 | 55.4 | 56.2 | 56.2 |
| 337.5 | 56.2 | 56.2 | 55.8 | 55.8 | 55.8 | 55.4 | 56.2 | 56.2 |

Depth: 1018 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 54.3 | 54.7 | 54.7 | 55.0 | 55.0 | 55.0 | 56.2 | 56.2 |
| 22.5 | 56.2 | 56.5 | 56.2 | 56.2 | 56.2 | 55.4 | 55.4 | 55.4 |
| 45.0 | 55.4 | 54.7 | 54.7 | 54.7 | 53.9 | 53.5 | 53.5 | 54.3 |
| 67.5 | 54.3 | 54.3 | 54.7 | 54.3 | 54.7 | 54.7 | 54.7 | 54.7 |
| 90.0 | 55.0 | 55.4 | 55.4 | 55.8 | 56.2 | 56.5 | 57.3 | 57.3 |
| 112.5 | 57.3 | 57.7 | 57.3 | 57.3 | 57.7 | 57.7 | 58.1 | 58.1 |
| 135.0 | 57.7 | 58.1 | 58.1 | 58.1 | 58.1 | 58.8 | 58.8 | 59.2 |
| 157.5 | 58.8 | 58.8 | 58.8 | 59.2 | 58.8 | 58.8 | 59.6 | 59.6 |
| 180.0 | 59.9 | 59.9 | 59.2 | 59.2 | 59.2 | 59.6 | 59.2 | 59.6 |
| 202.5 | 59.2 | 59.2 | 59.6 | 58.8 | 58.4 | 58.1 | 58.1 | 57.7 |
| 225.0 | 57.3 | 56.5 | 55.4 | 55.0 | 55.8 | 56.2 | 55.8 | 55.8 |
| 247.5 | 55.4 | 55.4 | 54.7 | 54.7 | 54.3 | 54.7 | 54.7 | 54.3 |
| 270.0 | 53.9 | 54.3 | 54.7 | 54.3 | 54.7 | 55.0 | 55.0 | 54.3 |
| 292.5 | 53.9 | 53.9 | 53.9 | 53.9 | 54.3 | 53.9 | 54.3 | 54.7 |
| 315.0 | 54.3 | 54.7 | 55.0 | 54.3 | 54.7 | 54.7 | 55.0 | 55.0 |
| 337.5 | 54.7 | 54.3 | 53.9 | 54.3 | 54.7 | 54.7 | 54.7 | 54.7 |

Depth: 1020 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 55.4 | 55.0 | 55.4 | 55.0 | 55.0 | 55.0 | 54.7 | 55.0 |
| 22.5 | 54.7 | 53.9 | 53.9 | 53.2 | 52.8 | 53.2 | 53.5 | 53.9 |
| 45.0 | 53.5 | 52.8 | 53.5 | 53.9 | 53.5 | 53.5 | 53.9 | 53.9 |
| 67.5 | 54.3 | 54.3 | 53.9 | 54.7 | 55.4 | 55.8 | 56.5 | 56.9 |
| 90.0 | 56.9 | 57.7 | 58.1 | 58.1 | 58.1 | 58.1 | 58.1 | 58.1 |
| 112.5 | 57.7 | 57.7 | 57.7 | 56.9 | 57.3 | 58.4 | 58.1 | 58.1 |
| 135.0 | 58.4 | 58.4 | 58.4 | 58.8 | 59.2 | 59.2 | 59.6 | 59.9 |
| 157.5 | 59.6 | 59.2 | 59.2 | 59.6 | 59.9 | 59.9 | 59.9 | 59.6 |
| 180.0 | 59.6 | 59.6 | 59.2 | 58.8 | 58.8 | 58.4 | 58.8 | 58.4 |
| 202.5 | 58.4 | 58.4 | 58.1 | 57.7 | 57.7 | 57.7 | 56.9 | 55.4 |
| 225.0 | 55.8 | 55.4 | 55.0 | 54.7 | 54.3 | 54.3 | 54.7 | 54.7 |
| 247.5 | 54.3 | 53.5 | 53.5 | 53.5 | 53.9 | 54.3 | 53.9 | 52.8 |
| 270.0 | 52.8 | 53.2 | 53.2 | 53.9 | 53.9 | 53.9 | 53.2 | 53.5 |
| 292.5 | 53.5 | 53.5 | 53.2 | 53.5 | 53.5 | 53.9 | 53.5 | 53.5 |
| 315.0 | 53.5 | 53.2 | 53.2 | 53.5 | 54.3 | 54.7 | 54.7 | 55.0 |
| 337.5 | 55.8 | 55.0 | 55.0 | 55.4 | 55.0 | 55.4 | 55.4 | 55.4 |

Depth: 1022 Tilt: 0 Range: 89.3 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 55.0 | 55.4 | 56.5 | 56.5 | 56.9 | 57.3 | 56.9 | 56.9 |
| 22.5 | 57.7 | 57.7 | 58.1 | 57.7 | 57.7 | 58.1 | 58.1 | 58.1 |
| 45.0 | 58.4 | 58.8 | 58.8 | 58.4 | 58.8 | 59.2 | 58.4 | 58.8 |
| 67.5 | 59.2 | 59.6 | 59.6 | 59.2 | 59.9 | 60.3 | 60.3 | 59.9 |
| 90.0 | 59.6 | 59.2 | 59.2 | 59.2 | 59.9 | 59.9 | 59.6 | 59.6 |
| 112.5 | 59.2 | 59.2 | 59.2 | 58.8 | 59.2 | 59.6 | 60.3 | 60.3 |
| 135.0 | 59.6 | 59.2 | 57.7 | 57.7 | 56.9 | 56.9 | 54.7 | 55.0 |
| 157.5 | 54.7 | 54.3 | 53.5 | 53.9 | 53.9 | 53.5 | 53.5 | 53.5 |
| 180.0 | 53.5 | 53.5 | 53.2 | 52.8 | 52.4 | 52.4 | 52.8 | 52.0 |
| 202.5 | 52.4 | 52.4 | 52.8 | 52.8 | 52.8 | 53.2 | 53.2 | 53.2 |
| 225.0 | 53.2 | 52.8 | 53.2 | 53.2 | 52.8 | 52.4 | 52.8 | 52.4 |
| 247.5 | 52.0 | 53.2 | 53.5 | 53.9 | 53.5 | 53.2 | 53.2 | 54.3 |
| 270.0 | 55.4 | 55.4 | 55.8 | 55.8 | 55.4 | 55.8 | 55.8 | 56.2 |
| 292.5 | 55.4 | 55.4 | 55.8 | 55.4 | 55.0 | 55.0 | 54.7 | 54.7 |
| 315.0 | 54.7 | 54.7 | 54.7 | 53.9 | 53.2 | 53.5 | 52.8 | 52.8 |
| 337.5 | 52.4 | 53.5 | 53.5 | 53.5 | 53.5 | 54.7 | 54.3 | 55.0 |

Depth: 1024 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 52.8 | 53.2 | 52.8 | 52.8 | 53.2 | 53.9 | 53.9 | 53.9 |
| 22.5 | 53.6 | 53.2 | 53.6 | 53.9 | 54.3 | 55.1 | 55.1 | 55.1 |
| 45.0 | 54.3 | 54.7 | 55.1 | 55.4 | 56.2 | 56.6 | 56.6 | 57.7 |
| 67.5 | 58.1 | 58.1 | 58.8 | 58.8 | 58.8 | 58.5 | 58.5 | 58.8 |
| 90.0 | 58.8 | 58.8 | 58.8 | 58.8 | 59.2 | 58.8 | 58.8 | 58.8 |
| 112.5 | 59.2 | 59.2 | 59.2 | 59.6 | 60.0 | 59.2 | 58.8 | 58.5 |
| 135.0 | 58.5 | 58.8 | 58.5 | 58.5 | 58.5 | 58.8 | 58.8 | 58.5 |
| 157.5 | 57.3 | 57.3 | 57.7 | 58.1 | 58.5 | 58.8 | 58.5 | 58.1 |
| 180.0 | 57.3 | 56.2 | 56.6 | 55.4 | 55.4 | 55.8 | 56.2 | 55.8 |
| 202.5 | 55.8 | 54.7 | 53.9 | 53.9 | 52.4 | 52.0 | 50.9 | 50.9 |
| 225.0 | 51.3 | 51.7 | 50.5 | 50.2 | 49.4 | 49.4 | 49.4 | 49.8 |
| 247.5 | 50.5 | 50.9 | 50.9 | 51.3 | 52.4 | 52.4 | 52.4 | 52.0 |
| 270.0 | 52.0 | 52.4 | 52.0 | 52.4 | 52.4 | 51.3 | 50.2 | 50.2 |
| 292.5 | 50.2 | 50.9 | 51.3 | 51.3 | 51.7 | 51.7 | 53.2 | 53.9 |
| 315.0 | 54.3 | 54.3 | 54.3 | 54.7 | 55.1 | 55.8 | 56.2 | 56.2 |
| 337.5 | 56.2 | 56.2 | 56.2 | 55.4 | 54.7 | 54.7 | 53.9 | 53.9 |

Depth: 1026 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 56.9 | 56.2 | 56.2 | 55.8 | 55.1 | 53.9 | 53.2 | 52.8 |
| 22.5 | 51.7 | 51.3 | 52.0 | 51.7 | 52.0 | 52.8 | 52.4 | 51.7 |
| 45.0 | 50.9 | 51.7 | 52.4 | 52.8 | 52.0 | 52.8 | 51.7 | 52.0 |
| 67.5 | 52.4 | 53.9 | 54.3 | 55.1 | 55.1 | 56.2 | 56.2 | 58.1 |
| 90.0 | 58.8 | 59.2 | 59.2 | 58.8 | 58.1 | 57.7 | 58.1 | 58.8 |
| 112.5 | 60.3 | 59.6 | 60.0 | 60.0 | 59.6 | 60.3 | 60.0 | 60.0 |
| 135.0 | 59.2 | 58.8 | 58.1 | 58.5 | 57.7 | 57.7 | 57.3 | 57.3 |
| 157.5 | 57.3 | 57.3 | 57.3 | 58.5 | 59.2 | 59.2 | 58.5 | 57.7 |
| 180.0 | 56.9 | 56.6 | 56.6 | 56.9 | 57.7 | 58.5 | 58.8 | 58.5 |
| 202.5 | 58.1 | 58.1 | 56.6 | 56.2 | 55.1 | 53.9 | 52.8 | 52.8 |
| 225.0 | 51.3 | 51.3 | 51.3 | 50.2 | 49.4 | 48.6 | 50.2 | 50.2 |
| 247.5 | 51.3 | 50.9 | 50.9 | 49.8 | 48.6 | 48.6 | 49.4 | 49.0 |
| 270.0 | 50.2 | 49.4 | 49.4 | 50.5 | 50.2 | 50.5 | 51.7 | 51.3 |
| 292.5 | 50.9 | 52.8 | 50.2 | 49.0 | 50.9 | 51.3 | 49.8 | 50.2 |
| 315.0 | 50.9 | 50.2 | 50.2 | 49.8 | 49.8 | 50.2 | 53.2 | 54.3 |
| 337.5 | 55.1 | 55.4 | 55.4 | 54.7 | 55.4 | 55.4 | 56.2 | 56.6 |

Depth: 1028 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 50.2 | 49.8 | 49.0 | 50.2 | 50.2 | 50.9 | 50.5 | 50.9 |
| 22.5 | 51.3 | 50.5 | 49.8 | 50.2 | 49.8 | 49.4 | 50.2 | 50.5 |
| 45.0 | 50.9 | 51.3 | 51.3 | 50.9 | 51.7 | 52.0 | 52.4 | 52.4 |
| 67.5 | 52.8 | 53.2 | 54.7 | 56.2 | 57.7 | 58.8 | 58.8 | 58.1 |
| 90.0 | 57.3 | 56.9 | 58.1 | 59.2 | 58.1 | 57.3 | 56.9 | 57.3 |
| 112.5 | 58.1 | 59.6 | 59.6 | 58.8 | 57.7 | 58.8 | 58.5 | 58.1 |
| 135.0 | 57.7 | 56.9 | 57.3 | 56.6 | 56.9 | 57.3 | 57.3 | 57.7 |
| 157.5 | 57.7 | 57.3 | 57.7 | 57.3 | 56.9 | 57.7 | 58.1 | 58.1 |
| 180.0 | 57.7 | 57.3 | 56.9 | 57.3 | 56.6 | 57.3 | 57.7 | 56.2 |
| 202.5 | 55.1 | 52.8 | 53.2 | 53.9 | 52.8 | 52.0 | 51.7 | 52.0 |
| 225.0 | 51.3 | 50.2 | 50.5 | 49.8 | 50.9 | 51.7 | 50.9 | 49.4 |
| 247.5 | 50.2 | 50.2 | 50.5 | 49.8 | 50.9 | 51.3 | 50.5 | 49.8 |
| 270.0 | 50.2 | 50.5 | 50.2 | 50.2 | 58.8 | 58.5 | 57.7 | 56.9 |
| 292.5 | 56.2 | 56.9 | 57.3 | 56.9 | 56.6 | 56.6 | 56.6 | 55.8 |
| 315.0 | 55.1 | 54.7 | 55.8 | 55.4 | 55.8 | 55.1 | 54.7 | 55.4 |
| 337.5 | 55.1 | 55.4 | 55.4 | 55.4 | 54.7 | 53.9 | 52.4 | 51.3 |

Depth: 1030 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 53.6 | 53.2 | 52.8 | 52.4 | 51.7 | 50.9 | 50.2 | 50.2 |
| 22.5 | 50.2 | 50.5 | 50.2 | 49.8 | 49.8 | 49.8 | 49.4 | 49.0 |
| 45.0 | 49.4 | 49.4 | 49.8 | 50.2 | 50.2 | 50.2 | 49.8 | 50.5 |
| 67.5 | 50.9 | 52.0 | 52.8 | 53.2 | 53.6 | 56.2 | 57.3 | 59.2 |
| 90.0 | 59.6 | 58.8 | 59.6 | 59.6 | 59.2 | 59.2 | 59.2 | 59.6 |
| 112.5 | 59.2 | 60.0 | 60.0 | 59.6 | 60.0 | 59.6 | 59.2 | 58.8 |
| 135.0 | 59.2 | 58.5 | 57.7 | 57.3 | 56.9 | 56.9 | 56.9 | 57.7 |
| 157.5 | 57.3 | 57.3 | 56.9 | 57.7 | 57.3 | 56.9 | 56.9 | 56.9 |
| 180.0 | 56.6 | 56.9 | 56.9 | 56.9 | 56.6 | 56.2 | 55.8 | 55.4 |
| 202.5 | 55.1 | 55.1 | 55.8 | 55.4 | 54.7 | 53.9 | 53.2 | 52.4 |
| 225.0 | 51.3 | 51.7 | 52.0 | 51.7 | 51.3 | 50.5 | 50.5 | 50.5 |
| 247.5 | 50.2 | 50.9 | 50.5 | 50.9 | 50.5 | 51.7 | 51.7 | 51.3 |
| 270.0 | 51.3 | 51.3 | 51.3 | 51.7 | 51.3 | 51.7 | 52.0 | 54.3 |
| 292.5 | 54.7 | 55.1 | 55.8 | 55.8 | 56.9 | 56.9 | 57.7 | 57.7 |
| 315.0 | 57.7 | 57.7 | 57.3 | 58.1 | 58.5 | 58.5 | 58.5 | 57.3 |
| 337.5 | 58.1 | 57.3 | 57.7 | 56.9 | 56.2 | 56.6 | 56.2 | 55.4 |

Depth: 1032 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 55.1 | 53.9 | 53.9 | 53.2 | 50.5 | 50.5 | 50.5 | 50.5 |
| 22.5 | 50.5 | 50.2 | 49.4 | 50.2 | 49.8 | 49.8 | 49.4 | 49.4 |
| 45.0 | 49.8 | 49.8 | 50.2 | 49.8 | 49.4 | 50.2 | 50.5 | 50.5 |
| 67.5 | 50.9 | 50.5 | 50.9 | 51.3 | 51.7 | 51.3 | 53.9 | 55.1 |
| 90.0 | 55.1 | 55.4 | 56.2 | 56.9 | 58.1 | 58.1 | 57.3 | 58.5 |
| 112.5 | 59.2 | 59.6 | 60.0 | 60.3 | 60.0 | 59.6 | 59.6 | 59.2 |
| 135.0 | 60.3 | 60.3 | 59.2 | 59.6 | 59.6 | 58.5 | 57.3 | 56.6 |
| 157.5 | 56.6 | 55.8 | 56.2 | 55.8 | 56.2 | 56.9 | 56.9 | 56.9 |
| 180.0 | 56.2 | 56.2 | 56.2 | 55.8 | 55.8 | 55.4 | 55.1 | 55.1 |
| 202.5 | 54.7 | 54.3 | 53.9 | 53.6 | 52.8 | 52.8 | 52.4 | 52.0 |
| 225.0 | 51.3 | 50.5 | 49.4 | 49.8 | 49.8 | 49.4 | 49.8 | 50.2 |
| 247.5 | 49.4 | 48.6 | 49.4 | 49.4 | 49.0 | 49.0 | 49.0 | 48.6 |
| 270.0 | 49.8 | 50.2 | 49.4 | 48.6 | 48.3 | 48.3 | 50.2 | 55.1 |
| 292.5 | 59.6 | 59.2 | 59.2 | 60.0 | 59.2 | 58.5 | 57.3 | 57.3 |
| 315.0 | 56.6 | 56.6 | 56.6 | 57.3 | 57.7 | 56.9 | 57.7 | 57.7 |
| 337.5 | 57.7 | 58.1 | 58.1 | 57.7 | 57.3 | 56.6 | 56.2 | 55.4 |

Depth: 1034 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 56.9 | 56.9 | 57.7 | 58.1 | 58.5 | 58.5 | 52.8 | 49.4 |
| 22.5 | 49.0 | 49.0 | 48.6 | 48.3 | 48.3 | 48.3 | 48.6 | 47.9 |
| 45.0 | 48.3 | 48.6 | 48.3 | 47.9 | 47.9 | 47.9 | 49.0 | 48.6 |
| 67.5 | 48.3 | 49.4 | 49.4 | 49.4 | 47.9 | 49.0 | 49.4 | 49.4 |
| 90.0 | 52.4 | 53.6 | 53.9 | 54.3 | 55.1 | 55.8 | 56.9 | 57.3 |
| 112.5 | 57.3 | 57.7 | 58.1 | 57.7 | 57.7 | 58.5 | 59.2 | 61.1 |
| 135.0 | 61.1 | 60.7 | 61.1 | 61.5 | 61.8 | 60.7 | 58.1 | 57.7 |
| 157.5 | 57.7 | 57.3 | 57.3 | 56.9 | 56.2 | 56.2 | 55.4 | 55.1 |
| 180.0 | 55.4 | 55.4 | 55.4 | 55.1 | 54.7 | 54.7 | 54.3 | 54.3 |
| 202.5 | 53.9 | 53.6 | 52.4 | 53.2 | 52.4 | 51.7 | 52.0 | 51.3 |
| 225.0 | 50.5 | 50.5 | 49.4 | 49.4 | 48.6 | 48.6 | 49.0 | 48.6 |
| 247.5 | 49.0 | 48.3 | 47.9 | 46.8 | 47.1 | 47.5 | 47.1 | 46.8 |
| 270.0 | 46.4 | 47.1 | 48.3 | 47.9 | 48.6 | 49.4 | 46.8 | 46.8 |
| 292.5 | 46.0 | 46.4 | 48.3 | 54.3 | 56.9 | 56.6 | 56.2 | 55.4 |
| 315.0 | 54.7 | 55.1 | 55.1 | 55.4 | 55.1 | 55.1 | 56.2 | 56.2 |
| 337.5 | 56.6 | 56.2 | 56.2 | 57.7 | 58.1 | 58.1 | 58.1 | 56.9 |

Depth: 1036 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 55.1 | 55.8 | 55.4 | 54.7 | 53.2 | 52.4 | 51.7 | 50.9 |
| 22.5 | 49.4 | 49.8 | 48.6 | 47.9 | 47.5 | 46.8 | 46.4 | 47.1 |
| 45.0 | 47.1 | 47.5 | 47.1 | 46.8 | 46.8 | 46.4 | 46.0 | 46.0 |
| 67.5 | 46.8 | 47.1 | 47.1 | 47.5 | 47.1 | 48.6 | 48.6 | 51.7 |
| 90.0 | 53.2 | 53.2 | 53.6 | 53.2 | 54.3 | 55.1 | 55.8 | 56.6 |
| 112.5 | 56.6 | 57.7 | 58.1 | 58.5 | 59.2 | 59.2 | 59.2 | 59.6 |
| 135.0 | 59.6 | 59.6 | 60.3 | 60.7 | 60.3 | 57.7 | 57.3 | 56.9 |
| 157.5 | 55.4 | 55.4 | 55.4 | 54.3 | 54.3 | 54.7 | 54.3 | 54.3 |
| 180.0 | 53.9 | 53.6 | 54.3 | 54.3 | 53.9 | 53.9 | 53.6 | 52.4 |
| 202.5 | 51.7 | 51.7 | 51.7 | 51.3 | 50.9 | 50.2 | 50.2 | 49.8 |
| 225.0 | 49.0 | 48.6 | 47.5 | 46.8 | 46.0 | 46.8 | 46.4 | 46.0 |
| 247.5 | 46.4 | 45.3 | 45.3 | 45.3 | 45.3 | 45.6 | 46.0 | 45.3 |
| 270.0 | 45.3 | 45.3 | 45.6 | 46.0 | 46.4 | 46.4 | 46.8 | 46.8 |
| 292.5 | 46.8 | 48.3 | 55.4 | 57.3 | 57.7 | 57.3 | 54.3 | 52.8 |
| 315.0 | 52.0 | 52.4 | 52.8 | 54.3 | 54.3 | 54.7 | 55.1 | 55.1 |
| 337.5 | 55.1 | 55.1 | 55.4 | 55.8 | 56.2 | 56.6 | 56.6 | 56.2 |

Depth: 1038 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 55.4 | 55.4 | 55.1 | 55.1 | 53.9 | 52.8 | 52.8 | 52.8 |
| 22.5 | 51.7 | 51.7 | 50.5 | 49.8 | 49.4 | 48.3 | 46.8 | 46.0 |
| 45.0 | 45.6 | 45.6 | 46.0 | 46.0 | 45.6 | 44.9 | 44.5 | 44.5 |
| 67.5 | 45.3 | 46.0 | 46.0 | 46.4 | 46.4 | 46.4 | 46.4 | 45.6 |
| 90.0 | 45.6 | 45.6 | 45.3 | 45.6 | 46.4 | 46.8 | 47.5 | 47.5 |
| 112.5 | 47.5 | 55.4 | 56.2 | 55.4 | 57.3 | 58.8 | 59.2 | 59.2 |
| 135.0 | 59.2 | 58.5 | 56.6 | 55.1 | 56.2 | 55.8 | 56.2 | 57.3 |
| 157.5 | 56.9 | 55.8 | 53.9 | 54.3 | 53.9 | 53.2 | 52.0 | 52.4 |
| 180.0 | 52.0 | 52.0 | 52.0 | 51.3 | 52.0 | 51.7 | 51.3 | 51.3 |
| 202.5 | 49.8 | 50.2 | 49.4 | 49.8 | 49.0 | 47.1 | 47.5 | 47.9 |
| 225.0 | 47.5 | 47.5 | 47.5 | 46.8 | 46.4 | 45.3 | 44.9 | 44.5 |
| 247.5 | 44.1 | 44.1 | 43.4 | 43.4 | 43.0 | 42.6 | 43.0 | 43.0 |
| 270.0 | 42.6 | 42.6 | 42.6 | 42.2 | 42.6 | 42.2 | 42.6 | 50.2 |
| 292.5 | 51.7 | 52.0 | 53.6 | 53.6 | 53.9 | 54.7 | 54.7 | 54.3 |
| 315.0 | 53.9 | 52.8 | 52.8 | 52.4 | 52.8 | 53.2 | 53.9 | 54.7 |
| 337.5 | 55.4 | 55.4 | 55.8 | 55.8 | 55.8 | 55.8 | 56.6 | 56.2 |

Depth: 1040 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 56.2 | 56.2 | 55.8 | 55.8 | 55.1 | 55.4 | 54.7 | 54.3 |
| 22.5 | 52.8 | 51.7 | 51.3 | 49.8 | 49.0 | 47.9 | 47.5 | 47.1 |
| 45.0 | 47.1 | 46.4 | 45.3 | 45.6 | 45.6 | 46.0 | 45.3 | 45.6 |
| 67.5 | 45.3 | 44.9 | 44.1 | 44.5 | 44.5 | 45.6 | 46.0 | 45.3 |
| 90.0 | 45.3 | 45.6 | 46.0 | 45.3 | 45.6 | 46.4 | 50.2 | 55.1 |
| 112.5 | 56.9 | 57.7 | 57.7 | 57.7 | 57.3 | 58.1 | 58.5 | 59.6 |
| 135.0 | 60.7 | 63.7 | 65.2 | 66.0 | 66.0 | 65.6 | 64.9 | 59.2 |
| 157.5 | 56.9 | 54.7 | 53.2 | 52.0 | 51.7 | 52.0 | 52.8 | 52.4 |
| 180.0 | 52.4 | 52.4 | 51.3 | 50.9 | 50.5 | 50.9 | 50.5 | 49.0 |
| 202.5 | 47.9 | 47.9 | 47.5 | 47.5 | 47.1 | 47.5 | 47.1 | 47.1 |
| 225.0 | 46.8 | 46.4 | 45.6 | 45.3 | 44.5 | 43.7 | 43.7 | 43.4 |
| 247.5 | 43.4 | 43.4 | 43.0 | 42.6 | 41.9 | 41.1 | 41.9 | 42.2 |
| 270.0 | 42.2 | 41.9 | 41.9 | 41.5 | 43.0 | 43.4 | 44.1 | 45.3 |
| 292.5 | 49.4 | 51.3 | 51.3 | 51.3 | 52.0 | 52.0 | 52.8 | 53.6 |
| 315.0 | 54.7 | 53.2 | 51.7 | 51.3 | 51.3 | 52.8 | 54.3 | 53.9 |
| 337.5 | 56.2 | 57.3 | 56.6 | 56.2 | 56.6 | 56.6 | 56.6 | 55.8 |

Depth: 1042 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 58.5 | 58.8 | 57.7 | 57.3 | 56.2 | 55.8 | 55.4 | 55.8 |
| 22.5 | 55.1 | 53.2 | 51.7 | 50.5 | 50.2 | 48.6 | 47.1 | 45.3 |
| 45.0 | 44.5 | 45.3 | 43.7 | 43.4 | 43.0 | 42.6 | 41.9 | 41.5 |
| 67.5 | 40.4 | 41.1 | 43.4 | 44.1 | 44.5 | 45.3 | 43.0 | 43.7 |
| 90.0 | 44.5 | 44.9 | 44.5 | 44.5 | 45.6 | 66.7 | 66.0 | 65.2 |
| 112.5 | 64.9 | 63.7 | 63.7 | 63.4 | 64.1 | 64.5 | 64.9 | 63.7 |
| 135.0 | 64.1 | 64.1 | 64.5 | 64.5 | 62.2 | 59.2 | 56.6 | 56.2 |
| 157.5 | 52.8 | 50.5 | 50.5 | 50.2 | 50.2 | 49.8 | 50.2 | 49.4 |
| 180.0 | 50.5 | 50.2 | 50.2 | 50.2 | 49.0 | 47.1 | 47.1 | 47.5 |
| 202.5 | 46.8 | 47.1 | 46.8 | 46.4 | 45.6 | 45.6 | 45.6 | 44.9 |
| 225.0 | 44.5 | 44.1 | 43.4 | 43.4 | 43.4 | 43.0 | 43.0 | 42.2 |
| 247.5 | 41.5 | 41.1 | 40.4 | 40.7 | 40.4 | 39.6 | 38.5 | 38.1 |
| 270.0 | 38.5 | 40.0 | 41.5 | 43.0 | 44.1 | 45.3 | 45.6 | 46.0 |
| 292.5 | 46.4 | 46.4 | 46.8 | 46.8 | 47.9 | 48.3 | 50.5 | 51.3 |
| 315.0 | 51.3 | 51.7 | 51.3 | 50.9 | 51.7 | 52.4 | 53.9 | 54.7 |
| 337.5 | 55.8 | 56.2 | 56.2 | 56.2 | 55.8 | 56.9 | 56.9 | 57.7 |

Depth: 1044 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 57.7 | 57.3 | 56.9 | 57.3 | 57.3 | 57.3 | 57.7 | 58.8 |
| 22.5 | 58.8 | 59.2 | 58.8 | 59.2 | 60.0 | 58.8 | 59.2 | 58.1 |
| 45.0 | 58.5 | 58.5 | 60.0 | 57.7 | 53.2 | 53.6 | 49.8 | 49.4 |
| 67.5 | 49.8 | 47.5 | 44.1 | 41.9 | 41.5 | 41.5 | 41.1 | 41.5 |
| 90.0 | 43.0 | 63.0 | 62.6 | 61.8 | 61.5 | 62.6 | 61.8 | 63.7 |
| 112.5 | 63.4 | 63.4 | 62.6 | 63.0 | 61.5 | 61.1 | 62.2 | 63.0 |
| 135.0 | 63.0 | 62.2 | 61.5 | 59.6 | 56.9 | 55.8 | 55.4 | 57.7 |
| 157.5 | 58.5 | 57.7 | 57.7 | 56.6 | 54.7 | 54.3 | 53.2 | 52.0 |
| 180.0 | 51.3 | 50.9 | 51.3 | 50.9 | 50.5 | 50.2 | 49.8 | 49.0 |
| 202.5 | 47.5 | 47.5 | 46.4 | 45.3 | 44.9 | 44.5 | 44.1 | 44.1 |
| 225.0 | 43.7 | 43.7 | 43.0 | 43.0 | 42.6 | 41.5 | 41.5 | 40.7 |
| 247.5 | 40.7 | 40.4 | 40.4 | 40.0 | 39.2 | 39.2 | 39.6 | 39.6 |
| 270.0 | 39.2 | 38.1 | 37.7 | 37.3 | 37.3 | 37.0 | 37.0 | 38.1 |
| 292.5 | 38.8 | 40.0 | 41.5 | 42.2 | 42.6 | 41.5 | 41.5 | 45.3 |
| 315.0 | 46.0 | 45.6 | 45.6 | 46.8 | 47.5 | 48.3 | 49.4 | 49.4 |
| 337.5 | 50.2 | 51.3 | 51.7 | 52.0 | 52.4 | 53.2 | 55.4 | 58.8 |

Depth: 1046 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 58.1 | 58.8 | 58.8 | 59.6 | 60.3 | 60.0 | 59.2 | 59.2 |
| 22.5 | 58.8 | 59.2 | 60.0 | 59.6 | 59.6 | 59.6 | 60.3 | 60.3 |
| 45.0 | 60.0 | 59.6 | 59.2 | 59.2 | 59.2 | 60.3 | 60.7 | 61.1 |
| 67.5 | 61.8 | 62.6 | 63.4 | 63.0 | 61.1 | 61.1 | 61.8 | 61.8 |
| 90.0 | 61.8 | 62.2 | 63.4 | 62.6 | 62.2 | 60.7 | 60.3 | 60.7 |
| 112.5 | 61.1 | 60.7 | 61.8 | 62.2 | 61.5 | 61.8 | 62.2 | 62.6 |
| 135.0 | 63.0 | 63.4 | 60.7 | 58.8 | 58.8 | 57.7 | 57.3 | 58.8 |
| 157.5 | 59.2 | 59.6 | 59.6 | 53.2 | 48.3 | 44.9 | 43.4 | 42.2 |
| 180.0 | 42.2 | 41.9 | 42.6 | 43.0 | 43.4 | 42.6 | 43.0 | 42.2 |
| 202.5 | 41.5 | 41.1 | 40.0 | 40.0 | 40.0 | 40.4 | 40.0 | 39.6 |
| 225.0 | 39.6 | 38.8 | 37.3 | 37.3 | 37.0 | 36.6 | 36.2 | 35.4 |
| 247.5 | 35.8 | 35.1 | 33.9 | 33.9 | 34.3 | 34.3 | 34.7 | 34.7 |
| 270.0 | 35.4 | 35.4 | 35.4 | 35.4 | 35.4 | 35.8 | 36.2 | 36.6 |
| 292.5 | 40.0 | 42.2 | 42.6 | 43.7 | 44.9 | 44.9 | 45.6 | 47.1 |
| 315.0 | 48.3 | 49.8 | 51.3 | 52.0 | 52.8 | 53.2 | 53.6 | 52.8 |
| 337.5 | 54.7 | 55.1 | 57.3 | 56.9 | 56.9 | 57.7 | 58.1 | 57.7 |

Depth: 1048 Tilt: 0 Range: 89.4 VOS: 5986

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 55.4 | 55.8 | 56.2 | 56.9 | 56.9 | 58.5 | 59.6 | 61.1 |
| 22.5 | 60.0 | 59.2 | 58.1 | 57.7 | 57.3 | 57.7 | 55.8 | 52.8 |
| 45.0 | 52.0 | 46.4 | 42.6 | 41.5 | 35.8 | 32.8 | 30.5 | 30.9 |
| 67.5 | 30.9 | 56.6 | 58.8 | 58.8 | 57.7 | 57.7 | 58.1 | 58.8 |
| 90.0 | 58.8 | 59.2 | 61.1 | 61.5 | 61.8 | 59.2 | 58.8 | 59.2 |
| 112.5 | 59.6 | 60.0 | 61.8 | 62.2 | 62.6 | 62.2 | 62.2 | 61.5 |
| 135.0 | 61.5 | 61.1 | 61.1 | 61.5 | 50.5 | 49.8 | 50.2 | 50.2 |
| 157.5 | 49.8 | 47.5 | 47.1 | 45.3 | 45.3 | 45.3 | 44.5 | 44.1 |
| 180.0 | 44.9 | 44.1 | 44.1 | 43.4 | 42.6 | 41.1 | 40.7 | 39.6 |
| 202.5 | 39.6 | 39.6 | 39.6 | 38.5 | 38.8 | 38.5 | 37.7 | 38.1 |
| 225.0 | 38.1 | 37.7 | 37.0 | 36.2 | 35.4 | 35.1 | 34.7 | 33.9 |
| 247.5 | 33.9 | 33.9 | 32.8 | 32.4 | 31.7 | 30.2 | 29.4 | 29.0 |
| 270.0 | 29.0 | 29.0 | 30.9 | 33.6 | 34.3 | 33.9 | 34.7 | 33.9 |
| 292.5 | 34.3 | 35.1 | 35.4 | 35.4 | 36.6 | 40.4 | 41.1 | 43.0 |
| 315.0 | 44.1 | 45.3 | 46.8 | 46.4 | 47.1 | 48.3 | 50.5 | 51.3 |
| 337.5 | 50.9 | 52.0 | 54.3 | 54.3 | 54.7 | 54.7 | 55.1 | 55.4 |

Depth: 1050 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 77.0 | 77.5 | 78.0 | 77.5 | 76.6 | 76.6 | 77.5 | 77.5 |
| 22.5 | 78.0 | 77.0 | 76.6 | 76.6 | 77.0 | 77.0 | 77.0 | 77.0 |
| 45.0 | 77.5 | 78.0 | 79.4 | 78.9 | 79.4 | 78.4 | 78.9 | 78.9 |
| 67.5 | 78.4 | 78.9 | 78.4 | 78.9 | 78.9 | 78.4 | 77.5 | 76.6 |
| 90.0 | 75.6 | 76.6 | 77.0 | 76.6 | 76.6 | 76.6 | 76.1 | 76.6 |
| 112.5 | 76.6 | 75.6 | 75.2 | 74.7 | 74.7 | 75.6 | 75.6 | 75.6 |
| 135.0 | 75.2 | 75.2 | 75.6 | 75.2 | 74.7 | 74.3 | 73.8 | 73.8 |
| 157.5 | 73.3 | 74.3 | 73.8 | 73.3 | 73.8 | 73.8 | 73.3 | 73.8 |
| 180.0 | 73.8 | 73.8 | 73.3 | 73.3 | 72.4 | 72.4 | 72.4 | 72.4 |
| 202.5 | 72.4 | 71.9 | 71.5 | 71.9 | 71.5 | 70.1 | 71.0 | 71.0 |
| 225.0 | 71.0 | 71.0 | 70.1 | 70.5 | 70.5 | 71.9 | 71.9 | 71.5 |
| 247.5 | 71.9 | 72.4 | 72.4 | 72.4 | 73.3 | 72.4 | 72.4 | 72.9 |
| 270.0 | 72.9 | 73.3 | 72.9 | 73.8 | 73.8 | 73.3 | 72.9 | 72.9 |
| 292.5 | 72.9 | 73.8 | 74.3 | 74.7 | 74.7 | 74.3 | 74.7 | 75.2 |
| 315.0 | 75.2 | 75.2 | 75.6 | 76.1 | 76.1 | 75.6 | 75.2 | 74.7 |
| 337.5 | 74.7 | 75.6 | 75.6 | 76.1 | 76.1 | 75.6 | 76.1 | 76.6 |

Depth: 1052 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 76.6 | 76.6 | 76.6 | 76.6 | 76.1 | 76.6 | 76.6 | 77.0 |
| 22.5 | 77.5 | 78.0 | 77.5 | 77.0 | 77.0 | 77.0 | 77.0 | 77.0 |
| 45.0 | 77.0 | 77.0 | 77.5 | 77.5 | 77.5 | 77.5 | 78.4 | 78.9 |
| 67.5 | 78.4 | 78.4 | 78.4 | 78.4 | 78.9 | 78.0 | 77.5 | 77.0 |
| 90.0 | 76.6 | 76.1 | 76.1 | 76.6 | 76.6 | 76.1 | 76.1 | 76.1 |
| 112.5 | 76.1 | 75.6 | 75.2 | 74.7 | 75.2 | 75.2 | 74.7 | 75.2 |
| 135.0 | 74.7 | 75.2 | 75.2 | 75.2 | 74.3 | 73.8 | 73.8 | 73.8 |
| 157.5 | 73.3 | 73.3 | 73.8 | 74.3 | 74.3 | 74.7 | 74.3 | 74.3 |
| 180.0 | 74.3 | 73.8 | 73.3 | 72.9 | 72.4 | 72.4 | 71.5 | 71.0 |
| 202.5 | 71.5 | 71.0 | 71.5 | 71.9 | 71.5 | 70.1 | 70.1 | 69.6 |
| 225.0 | 70.1 | 70.1 | 70.1 | 70.1 | 69.6 | 70.5 | 70.1 | 70.1 |
| 247.5 | 71.0 | 71.5 | 71.5 | 71.5 | 71.9 | 72.4 | 71.5 | 71.5 |
| 270.0 | 71.5 | 71.5 | 71.9 | 71.5 | 71.9 | 71.9 | 72.4 | 71.9 |
| 292.5 | 72.9 | 72.9 | 72.9 | 73.8 | 74.3 | 75.2 | 74.7 | 74.7 |
| 315.0 | 74.7 | 73.8 | 74.3 | 75.2 | 74.7 | 75.6 | 75.2 | 75.2 |
| 337.5 | 74.7 | 74.7 | 75.2 | 75.2 | 75.6 | 75.6 | 76.1 | 76.6 |

Depth: 1054 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 75.6 | 76.1 | 76.6 | 76.6 | 76.1 | 76.1 | 76.6 | 76.1 |
| 22.5 | 76.1 | 76.6 | 77.0 | 77.0 | 77.0 | 77.0 | 76.6 | 77.0 |
| 45.0 | 76.1 | 76.6 | 76.6 | 76.1 | 76.1 | 78.4 | 78.9 | 79.4 |
| 67.5 | 79.4 | 79.4 | 79.8 | 79.8 | 79.4 | 78.9 | 78.9 | 78.0 |
| 90.0 | 76.6 | 75.6 | 76.1 | 75.6 | 76.1 | 76.1 | 76.1 | 77.0 |
| 112.5 | 76.6 | 75.6 | 74.7 | 75.6 | 75.2 | 75.2 | 74.7 | 74.7 |
| 135.0 | 74.3 | 74.7 | 74.3 | 74.7 | 73.8 | 74.7 | 75.6 | 75.6 |
| 157.5 | 74.3 | 73.3 | 72.4 | 72.4 | 72.9 | 73.8 | 74.7 | 73.3 |
| 180.0 | 72.9 | 71.9 | 72.4 | 71.5 | 71.9 | 71.9 | 71.5 | 71.5 |
| 202.5 | 71.5 | 71.5 | 72.4 | 70.5 | 71.9 | 71.5 | 71.0 | 71.0 |
| 225.0 | 70.1 | 69.1 | 69.6 | 69.6 | 69.1 | 69.1 | 69.1 | 69.1 |
| 247.5 | 69.1 | 69.6 | 69.1 | 69.1 | 69.6 | 70.5 | 70.1 | 69.6 |
| 270.0 | 69.6 | 70.1 | 70.1 | 70.1 | 69.1 | 70.1 | 70.1 | 70.5 |
| 292.5 | 70.5 | 71.0 | 71.5 | 71.9 | 71.5 | 71.5 | 71.5 | 72.9 |
| 315.0 | 73.3 | 74.3 | 73.8 | 73.8 | 73.8 | 74.3 | 74.3 | 74.7 |
| 337.5 | 74.7 | 74.3 | 74.7 | 74.7 | 75.2 | 75.2 | 76.1 | 76.1 |

Depth: 1056 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 75.2 | 75.2 | 75.6 | 75.6 | 75.6 | 76.1 | 76.1 | 76.6 |
| 22.5 | 76.6 | 76.1 | 75.6 | 75.6 | 76.1 | 76.1 | 76.1 | 75.2 |
| 45.0 | 75.6 | 75.6 | 76.6 | 77.0 | 77.5 | 77.0 | 76.6 | 77.0 |
| 67.5 | 76.6 | 78.0 | 78.9 | 78.4 | 78.0 | 78.4 | 78.4 | 78.0 |
| 90.0 | 78.4 | 78.4 | 78.4 | 78.4 | 77.5 | 76.6 | 76.6 | 76.6 |
| 112.5 | 76.1 | 75.6 | 75.6 | 75.6 | 76.1 | 75.2 | 75.6 | 76.1 |
| 135.0 | 74.7 | 74.3 | 73.8 | 72.9 | 72.9 | 72.9 | 74.3 | 75.2 |
| 157.5 | 75.2 | 74.7 | 74.3 | 73.8 | 72.9 | 72.4 | 72.4 | 72.4 |
| 180.0 | 72.4 | 72.4 | 72.4 | 72.4 | 71.9 | 71.5 | 71.5 | 71.9 |
| 202.5 | 71.9 | 71.9 | 70.5 | 71.0 | 71.5 | 69.1 | 68.7 | 70.5 |
| 225.0 | 71.9 | 72.4 | 72.4 | 70.1 | 71.5 | 71.9 | 71.9 | 71.5 |
| 247.5 | 71.0 | 71.0 | 71.0 | 68.7 | 69.6 | 70.5 | 71.0 | 70.1 |
| 270.0 | 69.6 | 69.1 | 69.6 | 68.7 | 69.6 | 70.1 | 69.6 | 68.7 |
| 292.5 | 68.7 | 68.2 | 69.1 | 70.1 | 71.9 | 72.9 | 72.9 | 73.3 |
| 315.0 | 72.9 | 73.3 | 74.3 | 74.7 | 74.3 | 72.4 | 72.9 | 72.9 |
| 337.5 | 73.3 | 74.3 | 74.3 | 74.7 | 73.8 | 74.3 | 75.2 | 75.2 |

Depth: 1058 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 75.2 | 75.6 | 75.6 | 75.6 | 75.2 | 76.1 | 77.0 | 76.6 |
| 22.5 | 75.6 | 75.6 | 75.2 | 75.6 | 76.1 | 76.6 | 75.6 | 76.1 |
| 45.0 | 76.6 | 76.6 | 77.0 | 77.5 | 78.0 | 78.0 | 77.5 | 77.0 |
| 67.5 | 77.0 | 77.0 | 77.5 | 78.9 | 79.4 | 78.4 | 79.4 | 78.9 |
| 90.0 | 79.4 | 78.4 | 78.9 | 78.9 | 78.9 | 77.5 | 78.0 | 77.0 |
| 112.5 | 77.5 | 77.5 | 77.0 | 76.6 | 76.1 | 76.6 | 76.1 | 75.2 |
| 135.0 | 74.3 | 73.8 | 74.7 | 74.3 | 74.3 | 73.3 | 74.3 | 74.7 |
| 157.5 | 74.3 | 74.7 | 73.3 | 72.4 | 73.3 | 74.3 | 75.2 | 73.8 |
| 180.0 | 72.4 | 72.9 | 73.8 | 74.7 | 75.2 | 74.7 | 74.3 | 71.9 |
| 202.5 | 75.2 | 76.1 | 74.7 | 76.1 | 77.0 | 77.5 | 76.6 | 76.6 |
| 225.0 | 76.6 | 75.2 | 75.6 | 74.3 | 74.3 | 73.8 | 75.6 | 75.2 |
| 247.5 | 73.3 | 72.9 | 73.3 | 72.4 | 71.9 | 71.9 | 73.3 | 72.4 |
| 270.0 | 71.9 | 72.9 | 72.9 | 74.3 | 72.9 | 73.3 | 72.9 | 75.2 |
| 292.5 | 76.6 | 75.6 | 71.0 | 69.6 | 70.1 | 75.2 | 76.6 | 77.0 |
| 315.0 | 76.6 | 76.6 | 75.6 | 74.7 | 74.3 | 74.3 | 75.2 | 74.3 |
| 337.5 | 73.3 | 73.8 | 74.7 | 74.7 | 73.8 | 74.3 | 74.7 | 75.2 |

Depth: 1060 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 75.2 | 74.7 | 74.7 | 74.7 | 74.7 | 75.2 | 76.1 | 75.6 |
| 22.5 | 76.6 | 76.6 | 77.0 | 77.5 | 77.0 | 77.0 | 76.6 | 76.6 |
| 45.0 | 76.6 | 77.0 | 77.0 | 77.5 | 76.6 | 76.6 | 76.6 | 77.0 |
| 67.5 | 77.0 | 77.0 | 77.0 | 77.5 | 78.4 | 78.0 | 78.9 | 79.8 |
| 90.0 | 80.3 | 80.3 | 79.8 | 80.3 | 79.8 | 78.9 | 78.4 | 78.0 |
| 112.5 | 78.4 | 77.5 | 78.4 | 78.9 | 78.4 | 78.9 | 78.9 | 78.0 |
| 135.0 | 77.5 | 77.5 | 78.0 | 78.4 | 78.4 | 77.0 | 75.2 | 73.8 |
| 157.5 | 74.3 | 73.8 | 72.9 | 73.3 | 74.3 | 74.7 | 75.2 | 76.6 |
| 180.0 | 77.5 | 77.5 | 76.6 | 77.5 | 77.0 | 77.0 | 75.2 | 76.1 |
| 202.5 | 76.6 | 75.6 | 76.6 | 77.0 | 77.5 | 77.0 | 77.0 | 77.5 |
| 225.0 | 77.5 | 77.0 | 76.6 | 75.6 | 75.6 | 75.2 | 75.6 | 75.6 |
| 247.5 | 76.1 | 75.6 | 74.7 | 75.2 | 75.6 | 76.1 | 74.7 | 75.2 |
| 270.0 | 74.7 | 74.7 | 74.7 | 75.6 | 76.1 | 76.6 | 75.6 | 75.6 |
| 292.5 | 75.6 | 77.0 | 76.6 | 77.0 | 76.6 | 77.0 | 76.1 | 75.2 |
| 315.0 | 76.1 | 76.6 | 77.0 | 76.6 | 75.6 | 74.7 | 75.2 | 75.6 |
| 337.5 | 75.6 | 75.2 | 75.2 | 75.6 | 75.6 | 75.6 | 75.2 | 75.6 |

Depth: 1062 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 76.1 | 76.6 | 76.6 | 77.0 | 77.5 | 77.5 | 77.0 | 77.0 |
| 22.5 | 77.5 | 77.5 | 78.0 | 78.0 | 77.0 | 77.5 | 76.6 | 77.0 |
| 45.0 | 77.5 | 78.0 | 77.0 | 76.1 | 77.0 | 78.4 | 78.4 | 78.4 |
| 67.5 | 77.5 | 78.0 | 77.5 | 78.9 | 77.5 | 78.9 | 80.3 | 80.7 |
| 90.0 | 80.3 | 79.8 | 80.3 | 79.4 | 78.9 | 79.4 | 78.4 | 77.5 |
| 112.5 | 78.4 | 78.4 | 77.5 | 78.9 | 79.4 | 78.9 | 78.9 | 78.4 |
| 135.0 | 78.4 | 78.0 | 78.4 | 78.0 | 78.9 | 77.5 | 76.6 | 77.0 |
| 157.5 | 78.4 | 79.4 | 78.9 | 78.0 | 78.0 | 78.4 | 78.0 | 78.4 |
| 180.0 | 78.0 | 78.0 | 78.4 | 78.4 | 78.4 | 78.0 | 77.0 | 77.5 |
| 202.5 | 77.0 | 76.6 | 76.6 | 77.0 | 77.0 | 76.6 | 77.0 | 77.5 |
| 225.0 | 78.0 | 77.0 | 76.6 | 76.6 | 76.1 | 75.6 | 76.1 | 75.6 |
| 247.5 | 75.6 | 75.6 | 75.6 | 75.6 | 76.1 | 76.1 | 75.6 | 74.7 |
| 270.0 | 74.3 | 74.7 | 75.2 | 75.6 | 75.6 | 74.7 | 74.7 | 75.2 |
| 292.5 | 76.1 | 76.1 | 75.6 | 74.3 | 74.7 | 75.2 | 74.7 | 74.3 |
| 315.0 | 74.7 | 75.6 | 75.2 | 76.1 | 76.1 | 76.1 | 76.6 | 77.5 |
| 337.5 | 76.6 | 75.6 | 75.6 | 75.2 | 77.0 | 76.1 | 76.6 | 75.6 |

Depth: 1064 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 77.0 | 77.0 | 77.5 | 77.0 | 77.5 | 77.5 | 77.0 | 76.6 |
| 22.5 | 77.0 | 77.0 | 76.6 | 76.6 | 76.6 | 77.0 | 76.6 | 77.0 |
| 45.0 | 76.6 | 76.1 | 76.1 | 77.0 | 77.0 | 77.0 | 77.5 | 77.0 |
| 67.5 | 76.6 | 77.0 | 77.0 | 77.0 | 77.5 | 78.0 | 78.0 | 78.4 |
| 90.0 | 78.0 | 78.4 | 78.4 | 78.4 | 78.4 | 78.0 | 78.0 | 78.4 |
| 112.5 | 78.9 | 78.9 | 78.9 | 78.9 | 78.9 | 78.4 | 78.4 | 77.5 |
| 135.0 | 78.0 | 78.0 | 78.0 | 78.0 | 78.9 | 78.9 | 78.4 | 77.5 |
| 157.5 | 76.6 | 75.6 | 76.1 | 76.1 | 75.6 | 75.6 | 75.6 | 75.6 |
| 180.0 | 76.1 | 76.1 | 76.1 | 76.6 | 76.6 | 77.0 | 76.6 | 77.0 |
| 202.5 | 77.5 | 77.5 | 77.0 | 76.1 | 76.6 | 77.0 | 77.0 | 77.0 |
| 225.0 | 77.0 | 76.6 | 75.2 | 75.6 | 76.1 | 77.0 | 77.0 | 76.6 |
| 247.5 | 76.6 | 77.0 | 76.1 | 76.6 | 77.0 | 76.6 | 75.6 | 74.7 |
| 270.0 | 75.2 | 76.1 | 77.0 | 78.0 | 77.5 | 76.6 | 76.6 | 76.6 |
| 292.5 | 77.0 | 76.1 | 75.2 | 76.1 | 76.6 | 75.6 | 76.1 | 76.6 |
| 315.0 | 77.0 | 77.0 | 76.6 | 75.6 | 76.1 | 77.0 | 76.6 | 76.6 |
| 337.5 | 76.1 | 76.1 | 77.0 | 76.6 | 77.0 | 77.0 | 76.1 | 76.6 |

Depth: 1066 Tilt: 0 Range: 119.9 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 76.4 | 76.4 | 77.4 | 77.4 | 77.9 | 77.9 | 77.9 | 77.4 |
| 22.5 | 77.9 | 77.9 | 78.4 | 78.9 | 78.4 | 77.9 | 77.9 | 77.4 |
| 45.0 | 77.4 | 77.4 | 77.9 | 77.9 | 76.9 | 77.9 | 77.9 | 77.9 |
| 67.5 | 78.4 | 78.9 | 78.9 | 79.4 | 80.5 | 81.0 | 81.5 | 80.5 |
| 90.0 | 80.5 | 80.5 | 79.4 | 79.9 | 81.0 | 81.0 | 81.0 | 81.5 |
| 112.5 | 81.0 | 81.5 | 81.0 | 82.0 | 80.5 | 79.4 | 79.9 | 79.9 |
| 135.0 | 81.0 | 81.0 | 81.0 | 80.5 | 79.4 | 79.9 | 81.0 | 82.0 |
| 157.5 | 82.0 | 81.0 | 81.5 | 81.0 | 79.9 | 79.9 | 79.4 | 79.9 |
| 180.0 | 79.9 | 78.9 | 78.4 | 77.9 | 78.9 | 78.9 | 78.9 | 78.9 |
| 202.5 | 78.4 | 78.4 | 77.4 | 77.4 | 78.4 | 78.9 | 79.4 | 79.9 |
| 225.0 | 79.4 | 78.4 | 78.4 | 78.9 | 79.4 | 78.9 | 77.9 | 77.9 |
| 247.5 | 77.9 | 77.9 | 78.4 | 79.4 | 78.9 | 78.4 | 77.9 | 76.9 |
| 270.0 | 77.9 | 78.4 | 78.4 | 78.9 | 79.9 | 79.9 | 79.4 | 79.4 |
| 292.5 | 78.9 | 78.4 | 77.9 | 77.9 | 78.4 | 77.9 | 77.9 | 77.9 |
| 315.0 | 77.9 | 77.4 | 76.4 | 75.9 | 76.9 | 77.4 | 77.9 | 77.9 |
| 337.5 | 77.9 | 77.9 | 77.9 | 77.9 | 77.4 | 77.4 | 76.9 | 76.9 |

Depth: 1068 Tilt: 0 Range: 119.9 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 77.4 | 76.9 | 76.4 | 76.9 | 77.9 | 77.9 | 78.9 | 78.9 |
| 22.5 | 78.9 | 78.9 | 77.9 | 76.9 | 76.9 | 77.9 | 78.9 | 78.4 |
| 45.0 | 78.9 | 78.9 | 78.4 | 78.9 | 78.9 | 78.9 | 79.9 | 81.0 |
| 67.5 | 82.0 | 81.5 | 81.0 | 79.9 | 79.4 | 79.9 | 80.5 | 81.0 |
| 90.0 | 81.0 | 81.5 | 81.5 | 81.5 | 82.0 | 82.0 | 82.0 | 82.5 |
| 112.5 | 82.0 | 82.0 | 82.0 | 83.0 | 82.5 | 82.5 | 83.0 | 82.0 |
| 135.0 | 81.5 | 83.0 | 83.0 | 84.0 | 83.5 | 84.0 | 83.5 | 83.0 |
| 157.5 | 83.5 | 82.5 | 81.0 | 81.5 | 80.5 | 81.0 | 81.5 | 81.0 |
| 180.0 | 80.5 | 79.9 | 78.4 | 78.9 | 78.4 | 78.9 | 79.4 | 79.9 |
| 202.5 | 79.9 | 79.9 | 79.4 | 78.9 | 78.4 | 78.9 | 79.4 | 79.9 |
| 225.0 | 78.4 | 76.9 | 77.9 | 77.4 | 76.9 | 77.4 | 77.9 | 78.4 |
| 247.5 | 78.9 | 78.9 | 78.9 | 78.4 | 78.9 | 79.4 | 79.4 | 79.9 |
| 270.0 | 79.9 | 79.9 | 78.9 | 78.9 | 79.4 | 78.9 | 78.9 | 79.4 |
| 292.5 | 79.4 | 78.9 | 78.9 | 78.9 | 78.9 | 78.9 | 78.9 | 78.4 |
| 315.0 | 78.4 | 77.9 | 76.9 | 76.4 | 76.9 | 77.4 | 76.9 | 77.4 |
| 337.5 | 76.9 | 76.4 | 75.9 | 76.4 | 76.4 | 77.4 | 77.9 | 77.4 |

Depth: 1070 Tilt: 0 Range: 119.9 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 80.5 | 81.0 | 80.5 | 80.5 | 79.4 | 79.9 | 79.4 | 78.9 |
| 22.5 | 79.9 | 79.9 | 79.9 | 80.5 | 81.0 | 80.5 | 81.0 | 81.0 |
| 45.0 | 81.0 | 80.5 | 81.5 | 81.0 | 82.0 | 81.5 | 83.0 | 83.0 |
| 67.5 | 83.0 | 82.5 | 82.5 | 83.5 | 83.0 | 82.0 | 81.5 | 82.5 |
| 90.0 | 82.0 | 82.5 | 82.5 | 84.0 | 84.5 | 83.5 | 84.0 | 83.5 |
| 112.5 | 83.0 | 82.0 | 82.5 | 83.0 | 83.0 | 82.5 | 82.5 | 82.5 |
| 135.0 | 82.0 | 82.5 | 83.0 | 81.5 | 81.0 | 81.5 | 81.5 | 81.5 |
| 157.5 | 81.5 | 81.0 | 81.0 | 80.5 | 79.9 | 80.5 | 79.9 | 80.5 |
| 180.0 | 81.0 | 80.5 | 81.0 | 81.0 | 81.0 | 80.5 | 81.0 | 81.5 |
| 202.5 | 81.0 | 80.5 | 81.5 | 81.0 | 81.0 | 81.5 | 80.5 | 78.9 |
| 225.0 | 79.4 | 80.5 | 81.0 | 81.0 | 80.5 | 79.9 | 79.4 | 79.4 |
| 247.5 | 79.9 | 79.4 | 79.9 | 79.9 | 81.0 | 81.0 | 80.5 | 79.9 |
| 270.0 | 80.5 | 79.9 | 79.9 | 78.9 | 79.9 | 79.4 | 78.9 | 78.4 |
| 292.5 | 78.4 | 78.4 | 78.4 | 78.4 | 77.9 | 77.9 | 77.4 | 77.4 |
| 315.0 | 78.4 | 78.4 | 79.4 | 79.4 | 78.9 | 78.9 | 79.4 | 78.9 |
| 337.5 | 78.9 | 78.9 | 78.9 | 77.9 | 78.4 | 79.4 | 78.9 | 79.9 |

Depth: 1075 Tilt: 0 Range: 119.8 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 78.9 | 78.4 | 77.9 | 77.4 | 76.4 | 75.8 | 76.4 | 77.4 |
| 22.5 | 76.4 | 76.4 | 75.8 | 75.8 | 75.8 | 76.4 | 76.4 | 77.4 |
| 45.0 | 77.4 | 78.4 | 78.4 | 78.9 | 77.9 | 78.4 | 78.4 | 79.9 |
| 67.5 | 79.9 | 79.9 | 80.4 | 80.4 | 79.9 | 79.9 | 81.4 | 81.9 |
| 90.0 | 81.9 | 81.9 | 80.4 | 79.9 | 79.9 | 79.9 | 79.9 | 81.9 |
| 112.5 | 81.9 | 81.4 | 81.4 | 80.9 | 80.9 | 81.4 | 79.4 | 79.9 |
| 135.0 | 79.9 | 79.9 | 80.4 | 78.9 | 78.9 | 79.9 | 81.4 | 80.4 |
| 157.5 | 80.4 | 79.9 | 81.4 | 80.9 | 80.4 | 79.4 | 78.9 | 79.9 |
| 180.0 | 79.9 | 79.9 | 78.4 | 78.4 | 78.4 | 79.4 | 79.4 | 79.9 |
| 202.5 | 79.9 | 79.9 | 79.9 | 80.4 | 79.9 | 78.9 | 78.4 | 79.4 |
| 225.0 | 78.4 | 77.4 | 77.9 | 77.4 | 77.9 | 78.4 | 77.4 | 76.9 |
| 247.5 | 75.3 | 75.8 | 77.4 | 76.9 | 78.4 | 79.9 | 79.4 | 79.4 |
| 270.0 | 80.9 | 81.9 | 81.4 | 81.4 | 80.4 | 78.4 | 76.4 | 75.3 |
| 292.5 | 76.9 | 75.3 | 75.3 | 74.8 | 75.3 | 76.4 | 75.3 | 74.8 |
| 315.0 | 74.8 | 76.4 | 78.4 | 78.9 | 80.4 | 80.4 | 79.9 | 79.9 |
| 337.5 | 80.9 | 80.4 | 81.4 | 80.4 | 79.4 | 78.4 | 78.9 | 79.9 |

Depth: 1080 Tilt: 0 Range: 119.8 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 72.3 | 71.8 | 71.8 | 71.8 | 71.8 | 72.3 | 72.3 | 73.3 |
| 22.5 | 72.8 | 72.8 | 73.3 | 73.8 | 73.8 | 74.8 | 74.8 | 73.8 |
| 45.0 | 73.3 | 73.3 | 73.8 | 74.3 | 75.3 | 74.3 | 73.8 | 73.3 |
| 67.5 | 73.3 | 72.8 | 72.3 | 72.8 | 72.8 | 73.3 | 73.3 | 72.8 |
| 90.0 | 72.3 | 71.3 | 70.8 | 70.3 | 70.3 | 70.3 | 70.3 | 70.8 |
| 112.5 | 70.8 | 71.3 | 71.3 | 71.8 | 71.8 | 71.8 | 71.3 | 71.3 |
| 135.0 | 70.8 | 70.8 | 71.3 | 71.3 | 71.3 | 71.8 | 71.8 | 70.3 |
| 157.5 | 70.3 | 70.8 | 71.8 | 70.8 | 71.3 | 71.3 | 71.8 | 72.8 |
| 180.0 | 72.8 | 72.3 | 71.8 | 70.8 | 70.8 | 70.8 | 71.8 | 71.8 |
| 202.5 | 72.8 | 72.8 | 72.3 | 71.8 | 71.8 | 71.8 | 71.3 | 71.8 |
| 225.0 | 71.3 | 71.3 | 70.8 | 72.3 | 71.8 | 71.8 | 72.3 | 71.8 |
| 247.5 | 72.3 | 71.8 | 71.8 | 71.3 | 71.3 | 70.8 | 70.3 | 70.3 |
| 270.0 | 69.8 | 70.3 | 69.8 | 70.3 | 70.3 | 70.8 | 72.3 | 71.8 |
| 292.5 | 71.3 | 72.3 | 71.3 | 71.8 | 71.8 | 71.3 | 70.8 | 70.8 |
| 315.0 | 71.3 | 71.3 | 70.8 | 70.3 | 70.8 | 71.8 | 70.8 | 71.8 |
| 337.5 | 72.3 | 71.8 | 71.8 | 72.3 | 72.3 | 72.3 | 71.8 | 72.3 |

Depth: 1085 Tilt: 0 Range: 119.8 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 68.8 | 68.3 | 67.8 | 67.8 | 68.8 | 68.3 | 67.8 | 67.3 |
| 22.5 | 66.7 | 66.7 | 66.7 | 66.7 | 67.3 | 66.7 | 66.2 | 65.7 |
| 45.0 | 66.2 | 66.7 | 65.7 | 65.2 | 65.2 | 65.2 | 66.2 | 65.7 |
| 67.5 | 65.7 | 66.2 | 66.7 | 66.2 | 65.7 | 64.7 | 65.2 | 65.2 |
| 90.0 | 66.2 | 66.2 | 66.2 | 66.2 | 66.7 | 65.7 | 65.2 | 65.7 |
| 112.5 | 66.2 | 67.3 | 68.3 | 67.3 | 66.2 | 66.2 | 66.7 | 66.7 |
| 135.0 | 65.7 | 66.2 | 66.2 | 65.7 | 65.7 | 65.2 | 65.7 | 65.7 |
| 157.5 | 66.2 | 65.2 | 64.7 | 65.7 | 66.7 | 65.7 | 65.2 | 65.2 |
| 180.0 | 65.7 | 65.7 | 65.7 | 65.7 | 65.2 | 64.7 | 64.7 | 64.7 |
| 202.5 | 65.7 | 65.2 | 64.7 | 64.7 | 64.7 | 64.7 | 65.2 | 64.7 |
| 225.0 | 64.7 | 64.7 | 65.2 | 65.2 | 65.7 | 65.2 | 65.2 | 65.7 |
| 247.5 | 64.7 | 64.7 | 65.2 | 66.7 | 67.3 | 67.3 | 67.3 | 68.3 |
| 270.0 | 67.3 | 66.2 | 66.2 | 65.2 | 65.2 | 66.7 | 67.3 | 68.3 |
| 292.5 | 67.3 | 66.7 | 67.3 | 66.2 | 66.2 | 66.7 | 66.7 | 66.2 |
| 315.0 | 66.2 | 66.2 | 67.3 | 67.3 | 66.2 | 66.2 | 66.7 | 66.7 |
| 337.5 | 66.2 | 66.7 | 67.3 | 67.8 | 67.8 | 67.8 | 67.8 | 67.8 |

Depth: 1090 Tilt: 0 Range: 119.8 VOS: 5984

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 59.2 | 58.7 | 59.2 | 59.7 | 59.2 | 59.7 | 59.2 | 58.7 |
| 22.5 | 59.2 | 59.2 | 59.7 | 59.7 | 59.7 | 59.7 | 59.7 | 59.7 |
| 45.0 | 59.7 | 59.7 | 60.2 | 59.7 | 60.2 | 61.2 | 61.7 | 62.2 |
| 67.5 | 62.7 | 63.2 | 63.7 | 63.2 | 63.2 | 63.2 | 62.7 | 61.7 |
| 90.0 | 58.7 | 57.6 | 57.6 | 57.6 | 57.6 | 58.1 | 58.1 | 58.1 |
| 112.5 | 58.1 | 58.7 | 59.2 | 59.2 | 59.2 | 58.7 | 58.7 | 58.1 |
| 135.0 | 58.1 | 58.1 | 58.1 | 58.1 | 57.6 | 57.6 | 58.1 | 59.2 |
| 157.5 | 59.2 | 59.7 | 59.2 | 59.2 | 59.2 | 59.7 | 60.2 | 59.7 |
| 180.0 | 59.7 | 59.7 | 59.2 | 59.2 | 59.7 | 59.7 | 59.2 | 58.7 |
| 202.5 | 58.7 | 59.2 | 58.7 | 59.2 | 59.2 | 59.2 | 59.2 | 59.2 |
| 225.0 | 59.2 | 58.7 | 58.1 | 58.7 | 58.7 | 58.7 | 59.2 | 58.7 |
| 247.5 | 59.7 | 59.2 | 59.2 | 59.2 | 59.2 | 58.7 | 58.1 | 57.6 |
| 270.0 | 57.6 | 57.6 | 56.6 | 57.1 | 56.6 | 56.6 | 57.1 | 57.6 |
| 292.5 | 58.1 | 58.7 | 58.7 | 59.2 | 58.7 | 58.1 | 58.7 | 58.1 |
| 315.0 | 58.1 | 58.7 | 58.7 | 58.1 | 58.7 | 59.2 | 58.1 | 58.1 |
| 337.5 | 57.6 | 58.1 | 58.7 | 58.7 | 58.7 | 58.1 | 58.7 | 58.7 |

Depth: 1092 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 55.7 | 55.7 | 55.7 | 55.7 | 55.2 | 55.7 | 56.2 | 56.2 |
| 22.5 | 56.2 | 56.6 | 56.2 | 55.7 | 55.7 | 56.2 | 57.1 | 57.1 |
| 45.0 | 56.6 | 57.1 | 57.1 | 57.5 | 57.5 | 57.5 | 57.5 | 57.5 |
| 67.5 | 56.6 | 56.6 | 57.1 | 57.5 | 57.5 | 58.0 | 58.0 | 58.0 |
| 90.0 | 56.6 | 55.2 | 54.3 | 53.4 | 53.8 | 54.8 | 54.3 | 55.2 |
| 112.5 | 55.2 | 55.2 | 54.8 | 54.8 | 55.2 | 55.2 | 55.7 | 55.2 |
| 135.0 | 55.2 | 54.8 | 55.2 | 55.2 | 56.2 | 56.2 | 56.6 | 56.2 |
| 157.5 | 55.7 | 56.2 | 56.6 | 57.1 | 57.1 | 57.5 | 57.1 | 57.1 |
| 180.0 | 56.6 | 56.2 | 55.7 | 56.2 | 56.6 | 56.6 | 57.1 | 56.6 |
| 202.5 | 57.1 | 57.5 | 57.5 | 57.5 | 58.0 | 58.5 | 58.5 | 58.5 |
| 225.0 | 58.5 | 58.0 | 57.5 | 57.1 | 57.1 | 56.6 | 57.1 | 57.1 |
| 247.5 | 57.1 | 56.6 | 56.6 | 56.2 | 56.2 | 57.1 | 57.1 | 57.1 |
| 270.0 | 56.6 | 56.2 | 56.2 | 56.6 | 56.2 | 56.2 | 56.2 | 56.2 |
| 292.5 | 56.2 | 56.2 | 56.2 | 56.2 | 55.7 | 55.7 | 55.2 | 55.7 |
| 315.0 | 56.2 | 55.7 | 55.2 | 55.7 | 57.1 | 56.6 | 56.2 | 56.2 |
| 337.5 | 55.7 | 54.8 | 55.7 | 55.2 | 56.2 | 56.6 | 56.6 | 56.2 |

Depth: 1094 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 54.8 | 55.2 | 54.8 | 54.8 | 54.8 | 54.8 | 54.8 | 53.8 |
| 22.5 | 53.8 | 54.8 | 54.3 | 53.8 | 53.8 | 54.3 | 53.8 | 53.8 |
| 45.0 | 54.3 | 54.3 | 53.8 | 54.3 | 53.8 | 54.3 | 53.4 | 53.8 |
| 67.5 | 53.4 | 53.4 | 53.8 | 53.4 | 53.8 | 53.8 | 52.9 | 53.4 |
| 90.0 | 53.4 | 53.4 | 52.9 | 52.9 | 52.9 | 52.4 | 52.4 | 52.4 |
| 112.5 | 52.0 | 52.0 | 52.0 | 51.5 | 51.5 | 51.0 | 51.0 | 49.7 |
| 135.0 | 49.7 | 49.7 | 48.7 | 48.7 | 48.7 | 49.2 | 49.2 | 49.2 |
| 157.5 | 49.2 | 49.7 | 50.1 | 51.5 | 52.4 | 54.3 | 55.7 | 56.6 |
| 180.0 | 57.1 | 57.1 | 57.1 | 57.1 | 57.1 | 57.1 | 57.1 | 56.6 |
| 202.5 | 56.2 | 56.2 | 55.7 | 55.7 | 55.7 | 55.2 | 55.7 | 55.7 |
| 225.0 | 55.2 | 55.7 | 55.7 | 55.2 | 56.6 | 56.6 | 56.2 | 57.1 |
| 247.5 | 57.1 | 57.5 | 57.5 | 57.1 | 57.1 | 56.6 | 56.6 | 56.6 |
| 270.0 | 56.6 | 56.6 | 56.6 | 56.6 | 56.6 | 57.1 | 58.0 | 58.9 |
| 292.5 | 58.5 | 58.0 | 58.0 | 57.1 | 57.1 | 57.1 | 56.2 | 57.1 |
| 315.0 | 57.1 | 56.6 | 56.2 | 56.6 | 55.7 | 55.7 | 56.2 | 55.7 |
| 337.5 | 55.2 | 55.2 | 55.2 | 54.8 | 55.2 | 54.8 | 54.3 | 54.8 |

Depth: 1096 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 57.5 | 57.1 | 57.1 | 56.6 | 56.6 | 56.2 | 56.2 | 56.2 |
| 22.5 | 56.2 | 56.2 | 56.6 | 57.1 | 57.1 | 58.0 | 58.0 | 57.1 |
| 45.0 | 57.1 | 56.2 | 54.3 | 53.4 | 53.8 | 52.9 | 52.9 | 53.4 |
| 67.5 | 52.4 | 52.9 | 53.4 | 53.8 | 52.4 | 50.6 | 48.7 | 46.4 |
| 90.0 | 44.1 | 41.3 | 41.3 | 40.8 | 41.8 | 41.8 | 41.3 | 40.8 |
| 112.5 | 40.4 | 39.9 | 39.4 | 39.0 | 37.6 | 36.2 | 36.2 | 36.2 |
| 135.0 | 35.7 | 35.7 | 34.3 | 34.3 | 33.9 | 32.9 | 32.9 | 32.0 |
| 157.5 | 32.0 | 32.0 | 32.0 | 32.0 | 32.5 | 32.0 | 32.5 | 32.9 |
| 180.0 | 32.5 | 33.4 | 33.4 | 32.9 | 33.4 | 33.4 | 34.3 | 34.3 |
| 202.5 | 34.3 | 33.9 | 35.7 | 53.8 | 56.2 | 56.6 | 57.5 | 58.5 |
| 225.0 | 58.9 | 59.4 | 59.4 | 58.5 | 58.0 | 58.5 | 58.9 | 59.9 |
| 247.5 | 59.9 | 59.4 | 59.4 | 59.4 | 59.4 | 59.4 | 58.9 | 58.9 |
| 270.0 | 58.9 | 58.9 | 58.9 | 58.5 | 58.5 | 58.0 | 57.5 | 57.5 |
| 292.5 | 57.5 | 58.0 | 58.5 | 58.5 | 58.5 | 58.5 | 58.5 | 58.5 |
| 315.0 | 58.0 | 58.0 | 58.5 | 58.0 | 57.5 | 58.0 | 57.5 | 57.5 |
| 337.5 | 57.1 | 57.1 | 57.1 | 56.6 | 56.2 | 56.2 | 56.6 | 56.6 |

Depth: 1098 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 52.0 | 52.0 | 51.5 | 51.5 | 52.0 | 53.4 | 54.3 | 55.7 |
| 22.5 | 57.1 | 57.1 | 57.1 | 58.0 | 58.0 | 58.0 | 58.5 | 58.5 |
| 45.0 | 58.0 | 58.0 | 58.0 | 58.0 | 58.0 | 58.0 | 58.0 | 58.5 |
| 67.5 | 57.5 | 57.5 | 57.5 | 56.6 | 56.2 | 55.2 | 55.2 | 54.8 |
| 90.0 | 54.3 | 53.8 | 52.0 | 50.6 | 50.6 | 50.1 | 49.2 | 48.3 |
| 112.5 | 47.8 | 47.3 | 47.3 | 46.9 | 46.4 | 45.5 | 45.0 | 43.6 |
| 135.0 | 42.7 | 41.3 | 39.9 | 39.0 | 39.0 | 37.1 | 34.8 | 33.4 |
| 157.5 | 32.5 | 30.6 | 29.7 | 28.8 | 28.3 | 28.3 | 28.3 | 27.8 |
| 180.0 | 27.8 | 27.8 | 27.8 | 28.3 | 28.3 | 28.3 | 28.8 | 29.7 |
| 202.5 | 29.7 | 29.2 | 29.2 | 30.2 | 30.2 | 30.2 | 30.6 | 31.6 |
| 225.0 | 32.9 | 32.9 | 32.5 | 33.9 | 33.9 | 34.3 | 34.3 | 34.8 |
| 247.5 | 35.3 | 35.7 | 36.2 | 36.2 | 36.2 | 36.7 | 36.7 | 37.1 |
| 270.0 | 37.6 | 37.6 | 38.5 | 49.7 | 52.0 | 53.4 | 53.8 | 53.4 |
| 292.5 | 53.4 | 53.4 | 53.4 | 53.4 | 52.9 | 53.8 | 53.4 | 53.4 |
| 315.0 | 52.9 | 53.4 | 53.4 | 53.4 | 53.4 | 52.9 | 52.9 | 52.9 |
| 337.5 | 52.9 | 52.4 | 52.4 | 52.4 | 52.4 | 52.4 | 52.0 | 52.0 |

Depth: 1100 Tilt: 0 Range: 110.0 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 39.4 | 39.4 | 39.4 | 39.4 | 39.4 | 39.9 | 39.9 | 39.9 |
| 22.5 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.8 | 40.8 | 41.3 |
| 45.0 | 41.8 | 41.8 | 43.2 | 43.2 | 44.1 | 44.1 | 44.1 | 43.6 |
| 67.5 | 43.2 | 40.8 | 39.0 | 37.1 | 35.7 | 33.9 | 32.0 | 30.2 |
| 90.0 | 28.3 | 26.9 | 25.5 | 24.1 | 24.1 | 24.1 | 24.1 | 24.1 |
| 112.5 | 22.7 | 21.8 | 20.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 |
| 135.0 | 19.0 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 | 17.6 |
| 157.5 | 17.6 | 17.6 | 17.6 | 17.6 | 17.6 | 18.6 | 18.6 | 19.5 |
| 180.0 | 20.0 | 20.4 | 20.9 | 21.3 | 22.3 | 23.7 | 25.1 | 26.0 |
| 202.5 | 26.9 | 26.9 | 27.4 | 28.3 | 28.3 | 28.3 | 28.8 | 29.2 |
| 225.0 | 29.2 | 29.2 | 29.7 | 30.2 | 30.6 | 31.1 | 31.1 | 32.0 |
| 247.5 | 32.0 | 32.5 | 32.0 | 32.0 | 32.0 | 32.0 | 31.6 | 31.6 |
| 270.0 | 31.6 | 31.6 | 31.6 | 31.6 | 30.6 | 30.6 | 30.6 | 30.6 |
| 292.5 | 30.6 | 30.6 | 31.1 | 31.1 | 31.1 | 31.1 | 30.6 | 30.2 |
| 315.0 | 30.6 | 30.2 | 30.6 | 31.6 | 32.9 | 34.3 | 35.3 | 37.1 |
| 337.5 | 38.5 | 39.0 | 39.0 | 39.0 | 39.0 | 39.4 | 39.4 | 39.4 |

Depth: 1101 Tilt: 0 Range: 24.8 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 1.9 | 2.0 | 2.0 | 2.0 | 2.1 | 2.2 | 2.3 | 2.3 |
| 22.5 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| 45.0 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| 67.5 | 2.2 | 2.1 | 2.0 | 1.9 | 1.8 | 1.7 | 1.7 | 1.7 |
| 90.0 | 1.8 | 1.8 | 1.8 | 1.7 | 1.6 | 1.6 | 1.5 | 1.5 |
| 112.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 135.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 157.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 180.0 | 1.5 | 1.4 | 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 | 1.5 | 1.5 |
| 225.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 247.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 270.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 292.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 315.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.6 | 1.7 |
| 337.5 | 1.7 | 1.7 | 1.8 | 1.8 | 1.8 | 1.8 | 1.9 | 1.9 |

Depth: 1101 Tilt: -90 Range: 24.8 VOS: 5988

| Bearing | + 0.0 | + 2.8 | + 5.6 | + 8.4 | +11.3 | +14.1 | +16.9 | +19.7 |
|---|---|---|---|---|---|---|---|---|
| 0.0 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 22.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 45.0 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 67.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 90.0 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 112.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 135.0 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 157.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 180.0 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 202.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 225.0 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 247.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 270.0 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 292.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 315.0 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 337.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |

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

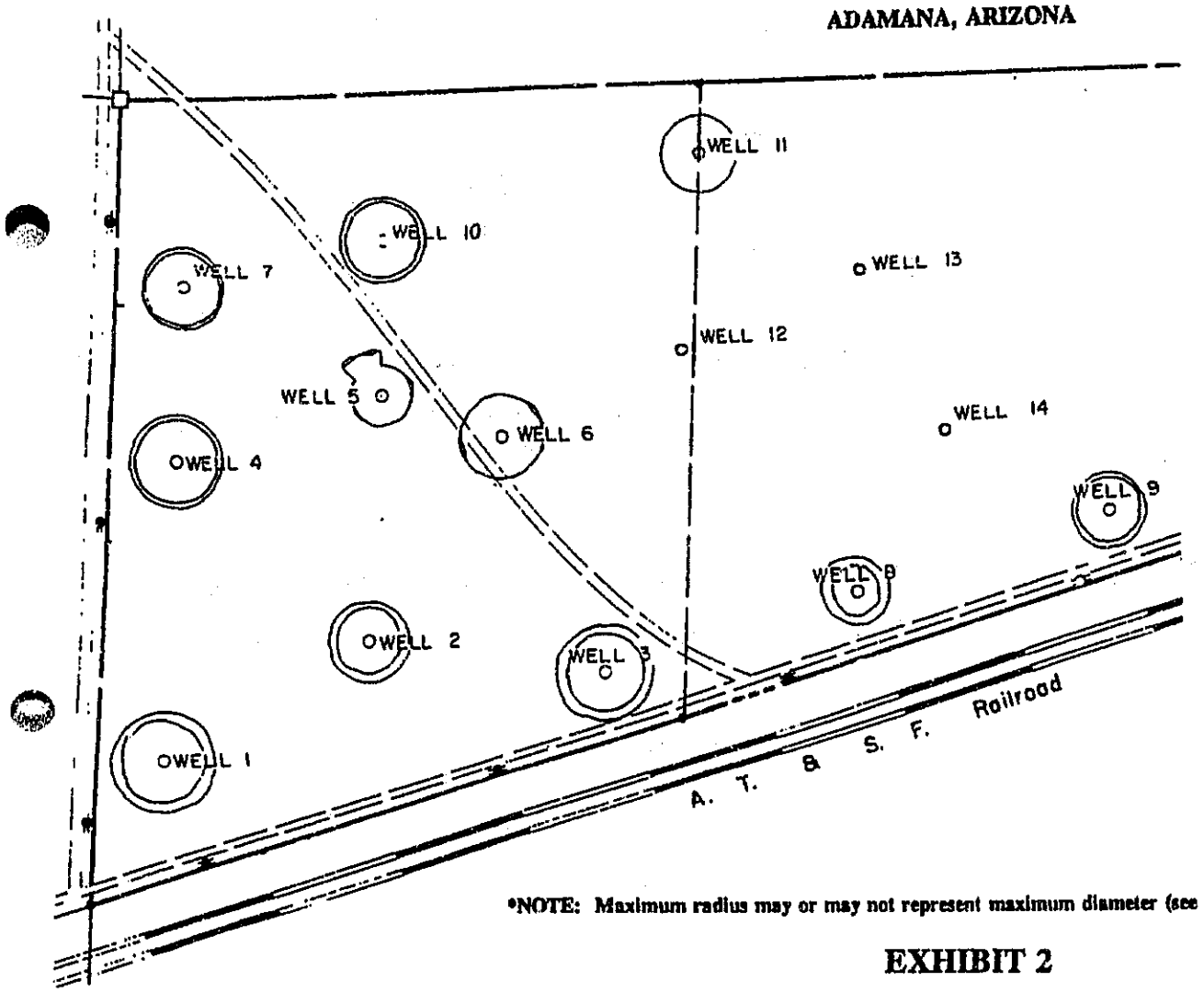
| Permit | Well No. | TD | Cavern | Initial Sonar | Max Radius | Sonar Volume | Second Sonar | Max Radius | Sonar Volume | Third Sonar | Max Radius | Sonar Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 556 | 1 | 1101' | 900-985' | 4/79 Dowell | 99'@942' | 150,532 bbls | 3/92 Digital* | 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'@958' | 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' | 158,797 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

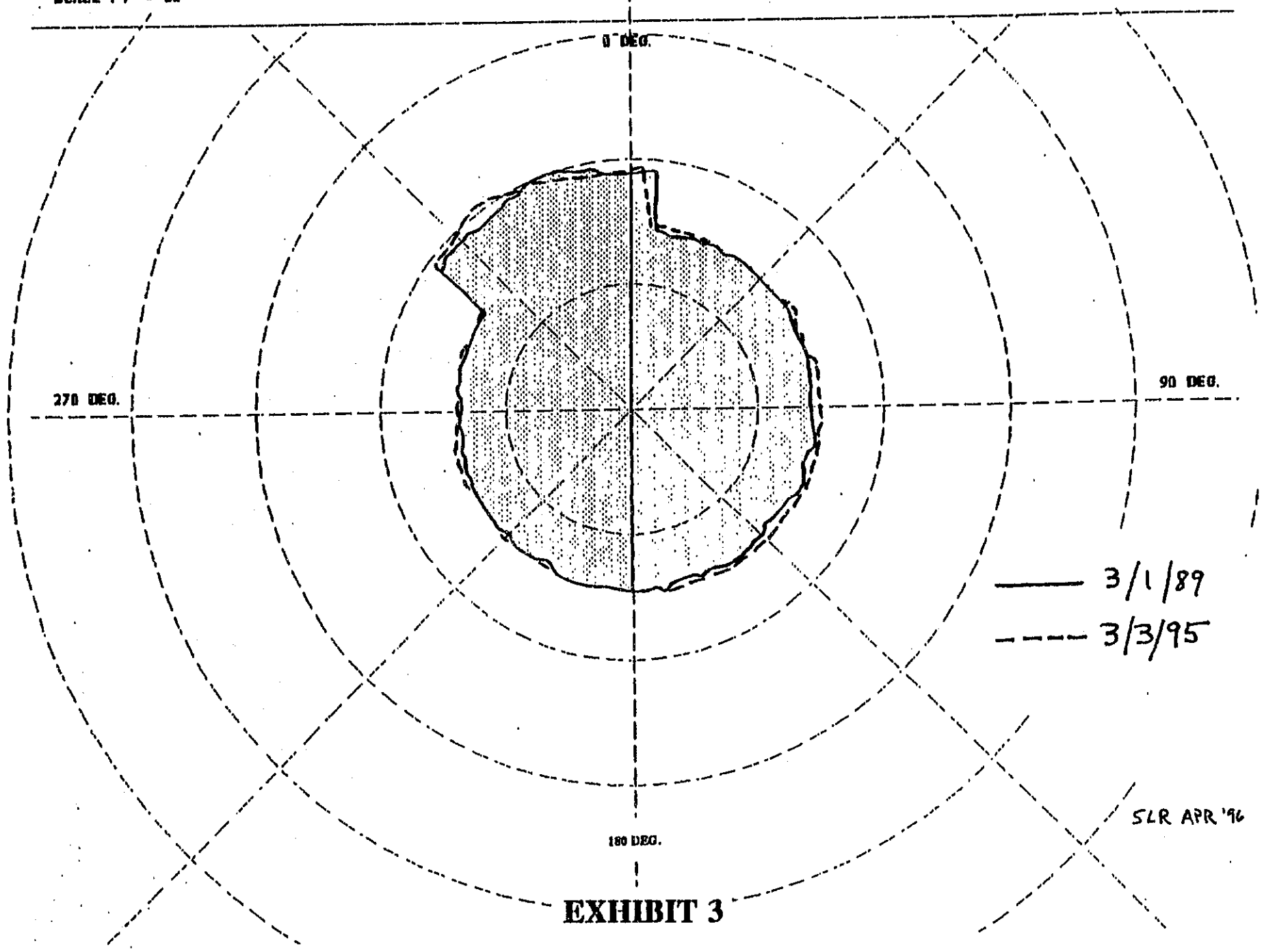



**EXHIBIT 3**

VERTICAL CROSSECTION

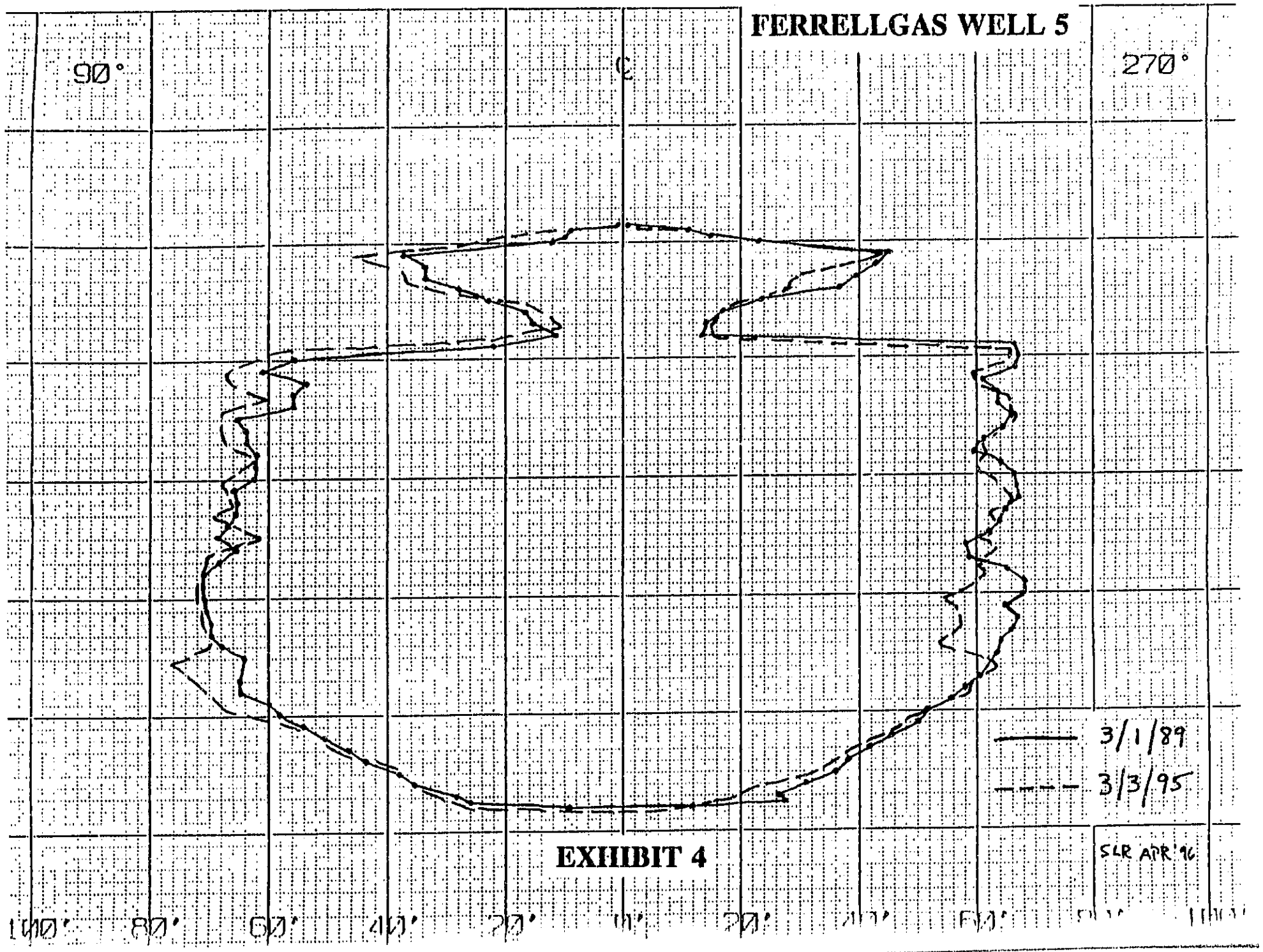



EXHIBIT 4

VERTICAL CROSSECTION

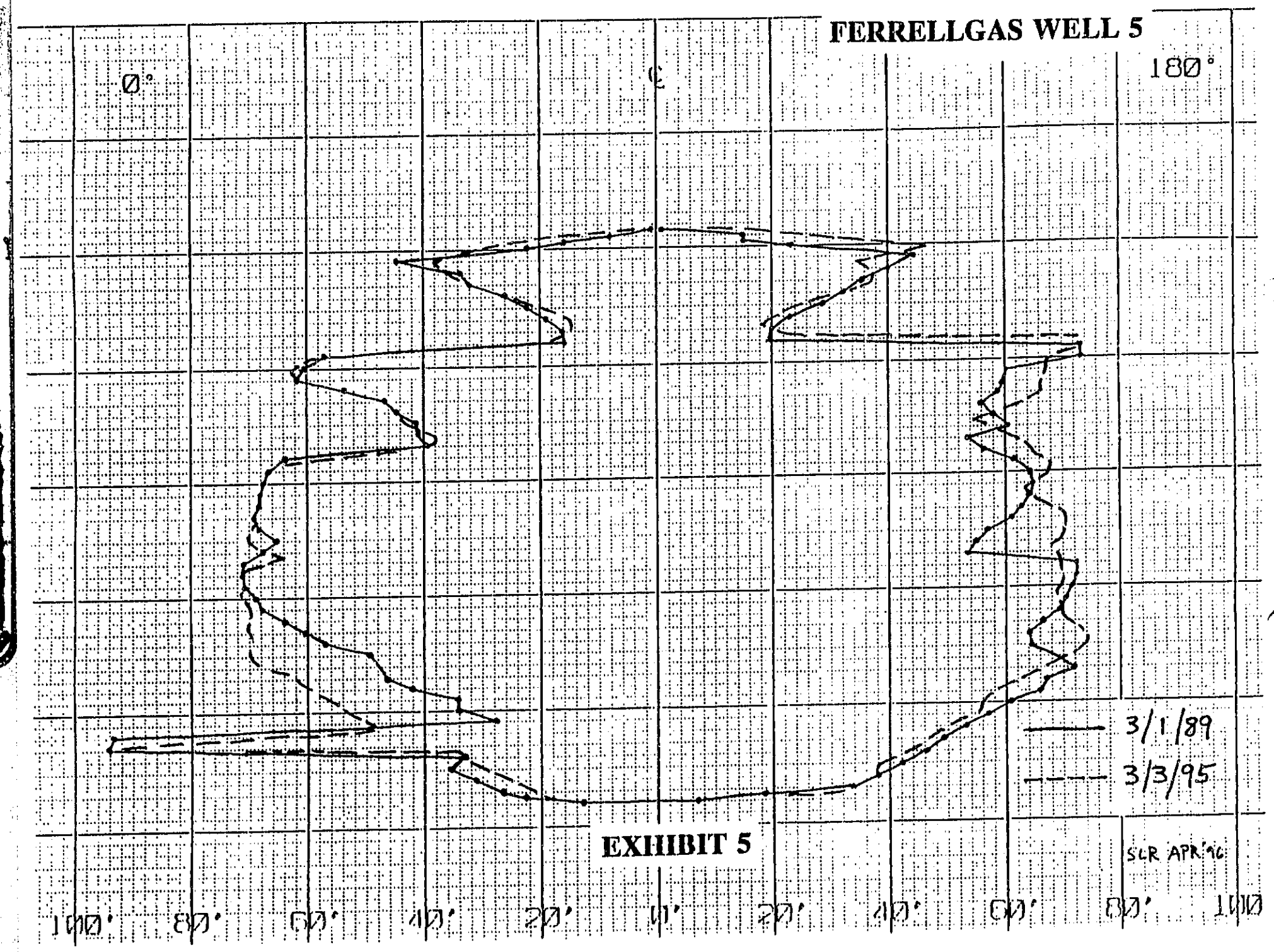



EXHIBIT 5

SCALE : 1" = 50'

MAXIMUM RADIUS PLOT

FERRELLGAS WELL 6

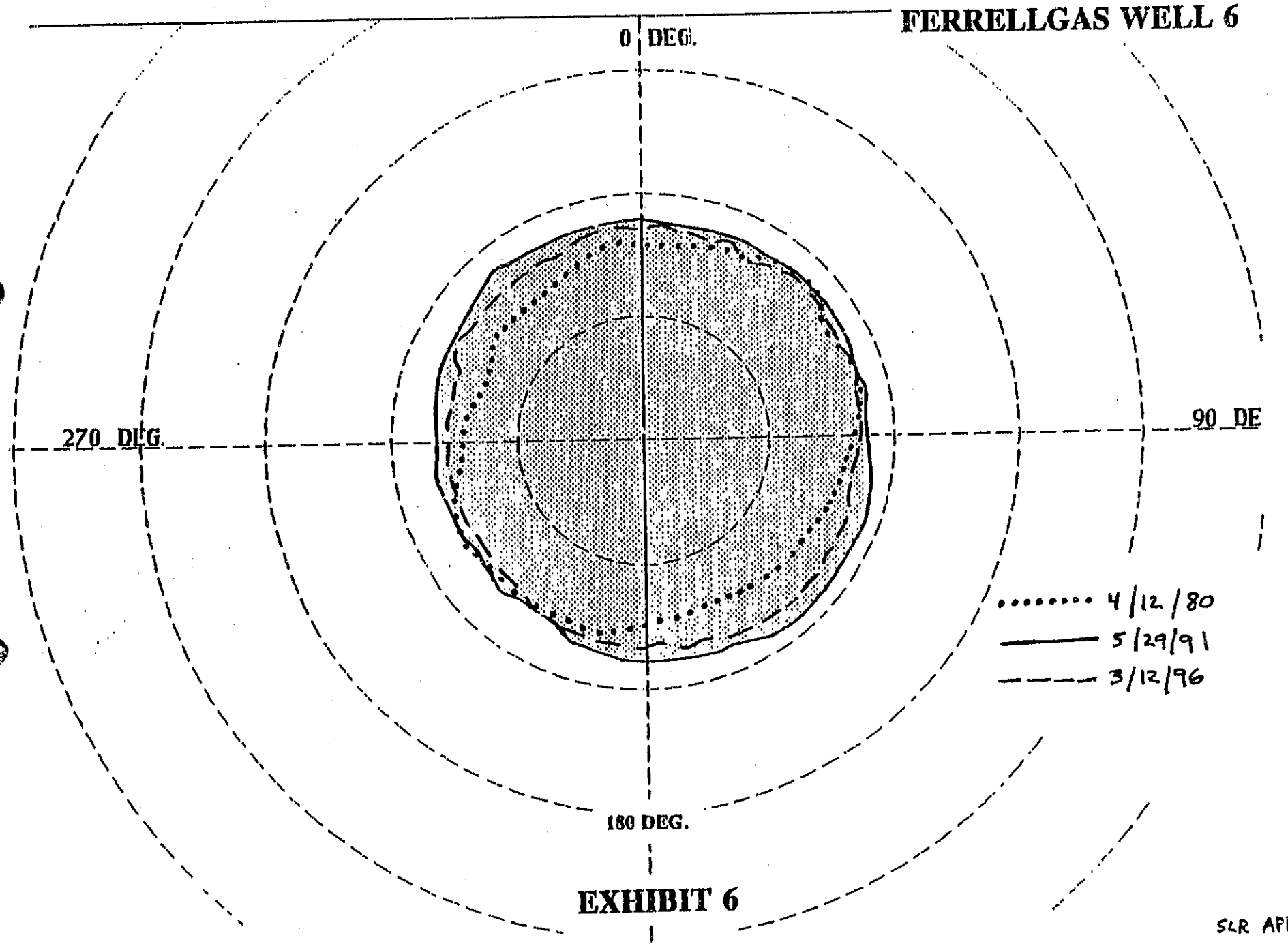



EXHIBIT 6

SLR APR '96

**FERRELLGAS WELL 6**

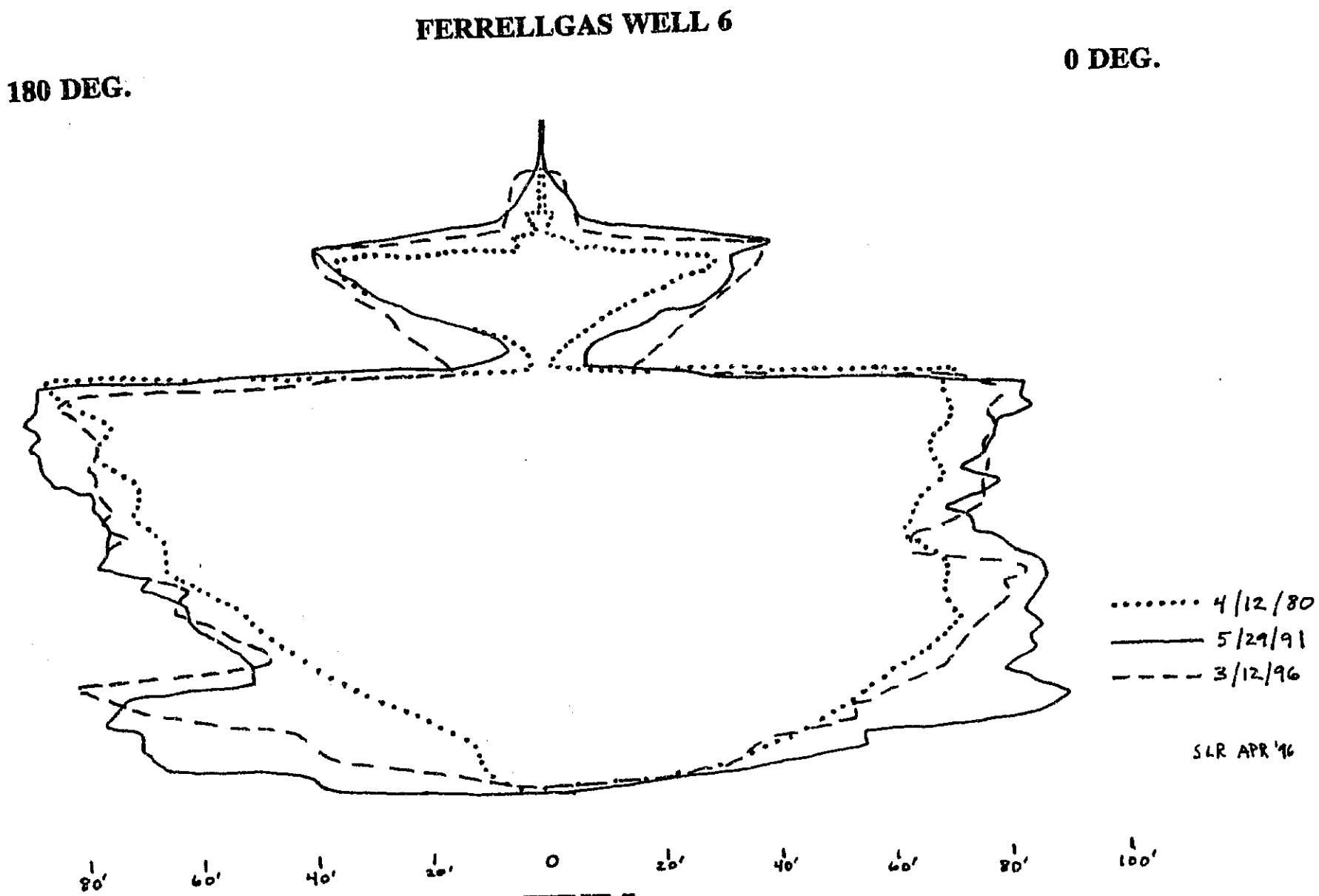



**EXHIBIT 7**

**FERRELLGAS WELL 6**

**270 DEG.** **90 DEG.**

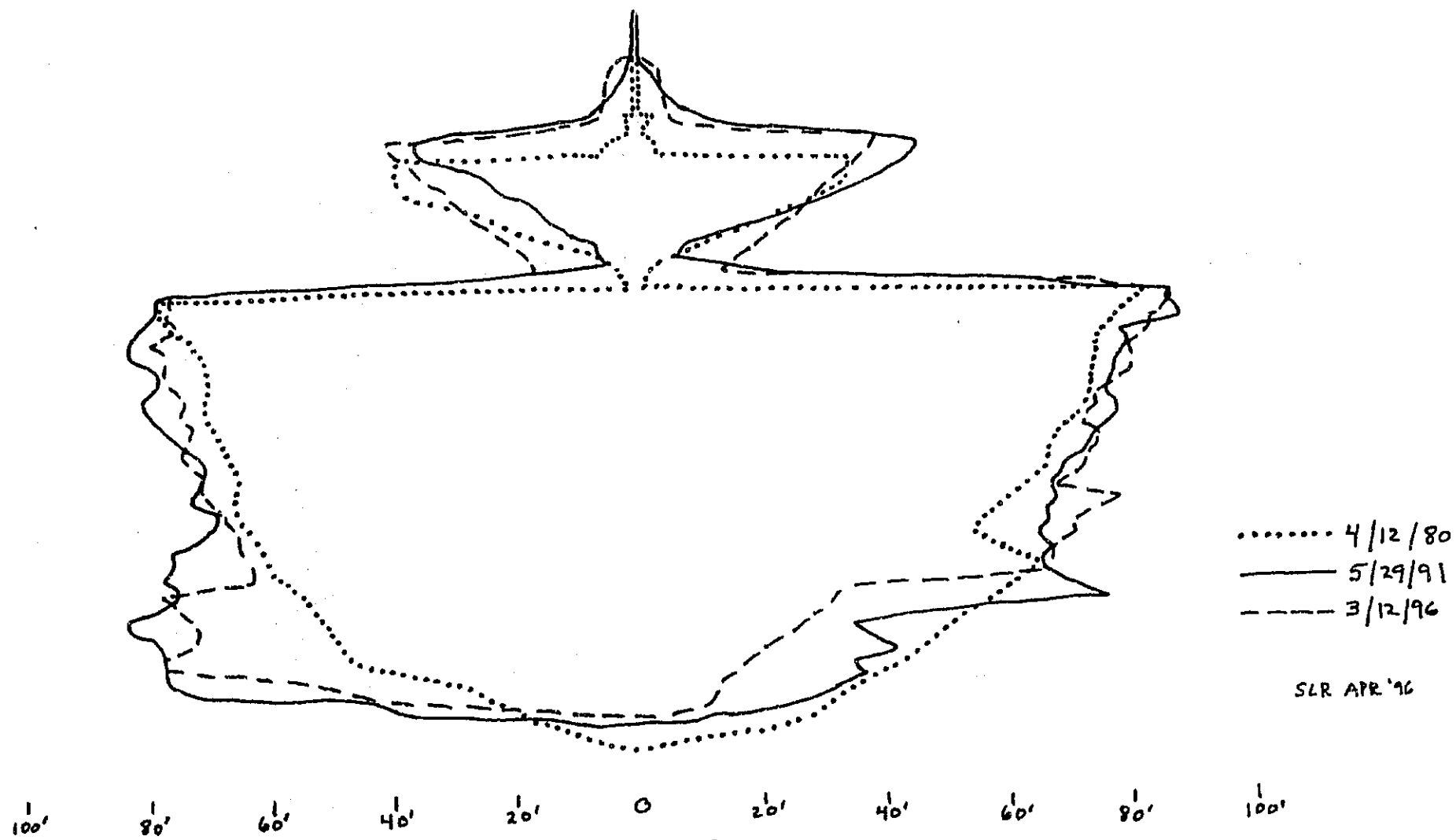



**EXHIBIT 8**

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 |

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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

file 672

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

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

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

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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

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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
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 |

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**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

Suburban Gas
18N-24E-8 nw nw
556 -8 sw nw
557 -8 nw nw
562 -8 sw nw
602 Williams Energy -8 nw nw
603 -8 nw nw
606 -8 nw nw
607 -8 nw nw
646 -8 nw nw
647 -8 ne nw
-8 ne nw
-8 nw sw
nw nw

September 10, 1981

Mr. Lester Adkins
Buckeye Gas Products Co.
P.O. Box 3478
Tulsa, Oklahoma 74101

Re: Former Suburban Gas and Williams Energy wells
located in sec. 8-T. 18 N.-R. 24 E., Apache County

Dear Mr. Adkins:

In order that we may bring our well files up to date, please have the enclosed "Designation of Operator" form executed and returned to us.

We will appreciate your cooperation in this matter.

Yours truly,

A. K. Doss
Executive Director

/os
Enc.

Suburban Gas
18N-24E-8 nw nw
556 -8 sw nw
557 -8 nw nw
562 -8 sw nw
602 Williams Energy -8 nw nw
603 -8 nw nw
606 -8 nw nw
607 -8 nw nw
646 -8 nw nw
647 -8 ne nw
648 -8 ne nw
671 -8 nw nw
672 -8 nw nw

September 10, 1981

Mr. Lester Adkins
Buckeye Gas Products Co.
P.O. Box 3478
Tulsa, Oklahoma 74101

Re: Former Suburban Gas and Williams Energy wells
located in sec. 8-T. 18 N.-R. 24 E., Apache County

Dear Mr. Adkins:

In order that we may bring our well files up to date, please have the enclosed "Designation of Operator" form executed and returned to us.

We will appreciate your cooperation in this matter.

Yours truly,

A. K. Doss
Executive Director

/os
Enc.

January 8, 1980

Mr. Bob Larson
Buckeye Gas Products Company
P.O. Box 3478
Tulsa, Oklahoma 74101

Dear Mr. Larson:

In reviewing our files, we find that the following items are needed to bring Buckeye Gas Products Company in compliance with the State of Arizona Rules and Regulations for operating underground storage facilities:

Rec'd 2-4-80

1. Organization Form.
2. Transfer of well bond from Williams Energy to Buckeye Gas. We will need approval of the bonding company to approve the transfer.
3. Completion of flare system to burn any escaping gas when a liquefied gas or other flammable substance is being injected into the caverns. It is imperative this system is operable; and since the facility is now operating in violation of Rule 706, Paragraph D, we will be making another on-site inspection to ascertain this system is working.

Very truly yours,

Don Whittaker
Director
Enforcement Section

DW:os

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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 COMPANY

321 SOUTH BOSTON
P. O. BOX 3478
TULSA, OKLAHOMA 74101
PHONE: (918) 583 1711

RECEIVED
DEC 10 1976
O & G CONS. COMM.

December 8, 1976
DJD:80:76
GOV 20/PRJ 1

Mr. William E. Allen, Director
Enforcement Section
Oil & Gas Conservation Comm.
State of Arizona
8686 North Central
Suite 106
Phoenix, Az. 85020

Dear Mr. Allen:

Enclosed are well completion reports for new wells numbered 10 and 11 at Adamana, Arizona along with a copy of the Borehole Compensated Sonic Log for each well.

Also enclosed to complete your file on the number 8 well drilled in 1975, is an updated report showing the addition of hanging the solution string while the rig was on location to drill wells 10 and 11. Well number 8 is now ready for space development as we had devoted our development capability during the past year to wells 7 and 9.

Very truly yours,

Dan J. Dougherty

Dan J. Dougherty
Manager of Storage Terminals

DJD/jd
encls.
cc: Alan B. Erwin; K&A, Inc.

672

DOXOL® UREGAS
Names in propane you can count on

STOR. TERM.
DEC - 8 1976
TRANSP.

K&A INC.
OIL & GAS PROPERTY MANAGEMENT
1400 FOURTH NATIONAL BUILDING • 15 WEST SIXTH ST. • TULSA, OKLA. 74119 • AREA 918 / 587-5115

DEC 10 1976
O & G CONS. COMM.

December 7, 1976

Mr. Dan Dougherty
Williams Energy Company
P. O. Box 3478
Tulsa, Oklahoma 74101

Re: Adamana Project
Apache County, Arizona

Dear Dan:

Enclosed are the Borehole Compensated Sonic Logs on Adamana Well Nos. 10 and 11, per your request, to accompany the well completion reports for the State of Arizona.

Very truly yours,

K & A, INC.

Pat

Pat Whittington
Secretary to Alan Erwin

pw
Enclosure

672

1000 WILEN • HOUSTON TEXAS 77002 • AREA 713/227-1537

STOR. TERM.
DEC - 7 1976
TRANSP.

K&A INC.
OIL & GAS PROPERTY MANAGEMENT
1400 FOURTH NATIONAL BUILDING • 15 WEST SIXTH ST. • TULSA, OKLA. 74119 • AREA 918 / 587-5115

RECEIVED
DEC 10 1976
O & G CONS. COMM.

December 6, 1976

Mr. Dan Dougherty
Williams Energy Company
P. O. Box 3478
Tulsa, Oklahoma 74101

Re: Adamana Project
Apache County, Arizona

Dear Dan:

Enclosed are the well completion forms for the State of Arizona on Well Nos. 8, 10 and 11, which are ready for your signature.

If you have any questions regardin' these forms, please give me a call.

Very truly yours,

K & A, INC.

Alan

Alan B. Erwin
Vice President

ABE:pw
Enclosure

672

October 22, 1976

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

Dear Mr. Dougherty:

Enclosed please find approved copy of Application to Drill for storage wells number 10 and number 11, Drilling Permits 671 and 672 and receipt for your check for $50.00.

Very truly yours,

William E. Allen
Director
Enforcement Section

WEA/vb

Enc.

WILLIAMS ENERGY COMPANY
321 SOUTH BOSTON
P. O. BOX 3478
TULSA, OKLAHOMA 74101
PHONE: (918) 583-1711

October 18, 1976
DJD:69:76
GOV 20

Mr. W. E. Allen, Director,
Enforcement Section
Arizona Oil & Gas Conservation Comm.
8686 N. Central, Suite 106
Phoenix, Arizona

Dear Mr. Allen:

Enclosed is Williams Energy Company's check number 167115. This is to cover filing fee for the drilling of storage wells number 10 and number 11 on the Williams property at Adamana, Arizona.

Also enclosed are "Application to Drill" (Form 3) for each well along with a print copy of the certified plat showing the well locations. Should any additional data be required please advise the undersigned.

Sincerely,

Dan Dougherty

Dan J. Dougherty
Manager of Storage Terminals

DJD/jh
encls.

DOXOL UREGAS
Names in propane you can count on

WIR

WILLIAMS ENERGY COMPANY

NATIONAL BANK OF TULSA BUILDING
P.O. BOX 3478
TULSA, OKLAHOMA 74101
PHONE: (918) 583-1711

November 21, 1972

RJW:414:72

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

Dear Mr. Allen:

Attached is the completed Organization Report for Williams Energy Company.

Very truly yours,

WILLIAMS ENERGY COMPANY

R. J. Wiruth

R. J. Wiruth
Manager of Operations

RJW:sw

Attachment

RECEIVED
NOV 27 1972

ORGANIZATION REPORT

Full Name of the Company, Organization, or Individual

Williams Energy Company

Post Office Address (Box or Street Address)

P. O. Box 3478, Tulsa, Oklahoma 74101

Plan of Organization (State whether organization is a corporation, joint stock association, firm or partnership, or individual)

Corporation

Purpose of Organization (State type of business in which engaged)

Retail and Wholesale L.P. Gas Marketing and Retail and Wholesale Merchandising

If a reorganization, give name and address of previous organization.

The Suburban Companies, 2021 North Towne Avenue, Pomona, California 91767

| If a foreign corporation, give (1) State where incorporated | (2) Name and post office address of state agent | (3) Date of permit to do business in state |
|---|---|---|
| Delaware | C.T. Corporation System<br>14 North 18th Avenue<br>Phoenix, Maricopa Co., Arizona 85007 | October 20, 1971 |

| Principal Officers or Partners (if partnership) NAME | TITLE | POST OFFICE ADDRESS |
|---|---|---|
| D. W. Calvert | President | P.O. Box 3478, Tulsa, Okla. 74101 |
| Patrick V. Franken | Vice President - General Manager | P. O. Box 3478, Tulsa, Oklahoma 74101 |
| Joseph W. Branson | Vice President - Administration | P. O. Box 3478, Tulsa, Oklahoma 74101 |
| Major O. Brunner | Secretary | P. O. Box 3478, Tulsa Oklahoma 74101 |
| Dean S. Piper | Controller | P. O. Box 3478, Tulsa Oklahoma 74101 |
| W. J. Collingsworth | Assistant Secretary | P. O. Box 3478, Tulsa, Oklahoma 74101 |

| DIRECTORS NAME | POST OFFICE ADDRESS |
|---|---|
| Joseph H. Williams | Suite 825<br>National Bank of Tulsa Bldg., Tulsa, OK. 74103 |
| D. W. Calvert | P. O. Box 3478, Tulsa, Oklahoma 74101 |
| Patrick V. Franken | P. O. Box 3478, Tulsa, Oklahoma 74101 |
| Joseph W. Branson | P. O. Box 3478, Tulsa, Oklahoma |
| Robert W. Shower | Suite 825<br>National Bank of Tulsa Bldg., Tulsa, OK. 74103 |

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Vice President 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.

Signature

11/21/72

Date

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Organization Report
File One Copy

Form No. 1

ORGANIZATION REPORT

Full Name of the Company, Organization, or Individual

Williams Energy Company

Post Office Address (Box or Street Address)

P. O. Box 3478, Tulsa, Oklahoma 74101

Plan of Organization (State whether organization is a corporation, joint stock association, firm or partnership, or individual)

Corporation

Purpose of Organization (State type of business in which engaged)

Retail and Wholesale L.P. Gas Marketing and Retail and Wholesale Merchandising

If a reorganization, give name and address of previous organization.

The Suburban Companies, 2021 North Towne Avenue, Pomona, California 91767

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| Major O. Brunner | Secretary | P. O. Box 3478, Tulsa Oklahoma 74101 |
| Dean S. Piper | Controller | P. O. Box 3478, Tulsa Oklahoma 74101 |
| W. J. Collingsworth | Assistant Secretary | P. O. Box 3478, Tulsa, Oklahoma 74101 |

| DIRECTORS NAME | POST OFFICE ADDRESS |
|---|---|
| Joseph H. Williams | Suite 825<br>National Bank of Tulsa Bldg., Tulsa, OK. 74103 |
| D. W. Calvert | P. O. Box 3478, Tulsa, Oklahoma 74101 |
| Patrick V. Franken | P. O. Box 3478, Tulsa, Oklahoma 74101 |
| Joseph W. Branson | P. O. Box 3478, Tulsa, Oklahoma |
| Robert W. Shower | Suite 825<br>National Bank of Tulsa Bldg., Tulsa, OK. 74103 |

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Vice President 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.

Signature

Date 11/21/72

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Organization Report
File One Copy

Form No. 1

**WILLIAMS ENERGY COMPANY** No. 167115

DOXOL PROPANE

UREGAS PROPANE

| VOUCHER | | INVOICE | | | INVOICE AMOUNT | DISCOUNT AMOUNT | NET AMOUNT |
|---|---|---|---|---|---|---|---|
| MO. | NUMBER | MO. | DAY | NUMBER | | | |
| 1K | 1730 | 10 | 13 | PERMITS | 50 00 | | 50 00 |

REMITTANCE STATEMENT - PLEASE DETACH CHECK BEFORE DEPOSITING