

Computer Inventoried

FILE ONLY  
28-34-20E

CRA, INC.  
PICKERING NO. 1  
DIPMETER REPORT



# SCHLUMBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS

September 23, 1965

PLEASE REPLY TO:  
SUITE 1120 WICHITA PLAZA BLDG.  
WICHITA, KANSAS 67202

CRA, Inc.  
Box 445  
Wellington, Kansas

Gentlemen:

This report is intended to summarize our interpretation of the Continuous Dipmeter Survey ran on your Pickering No. 1, Labette County, Kansas. Included in this report is the graphic presentation of dip calculations, the tabular presentation of dip calculations and a series of dip frequency polar diagrams the interpretation of which is discussed below.

The Mississippian formation in this well is on the southwest flank of a Mississippian high which trends north-south. The axis of the structure lies east of this well and higher structural position is to the north along this axis. A location about 1/4 mile south of the northeast corner of Sec. 28-34S-20E should find the Mississippian in a favorable structural position.

The sand interval from 466-475 is a bar sand which strikes N60E-S60W. Thicker sand can be expected to the northwest from this well.

The shaley interval from 284-344 is a series of bar sands which trend east-west. Cleaner sands and thicker sand intervals can be expected to the north of this well. It is difficult to determine how far you must move to accomplish this development.

The above interpretations represent our best judgement, and we are happy to give them to you. Nevertheless, since all interpretations are based on inferences from electrical and other measurements, we cannot and do not guarantee their accuracy or correctness, and we shall not be liable or responsible, except in the case of willful negligence

CRA, Inc.

-2-

September 23, 1965

on our part, for any loss, costs, damages or expenses that may be incurred or sustained from such interpretations.

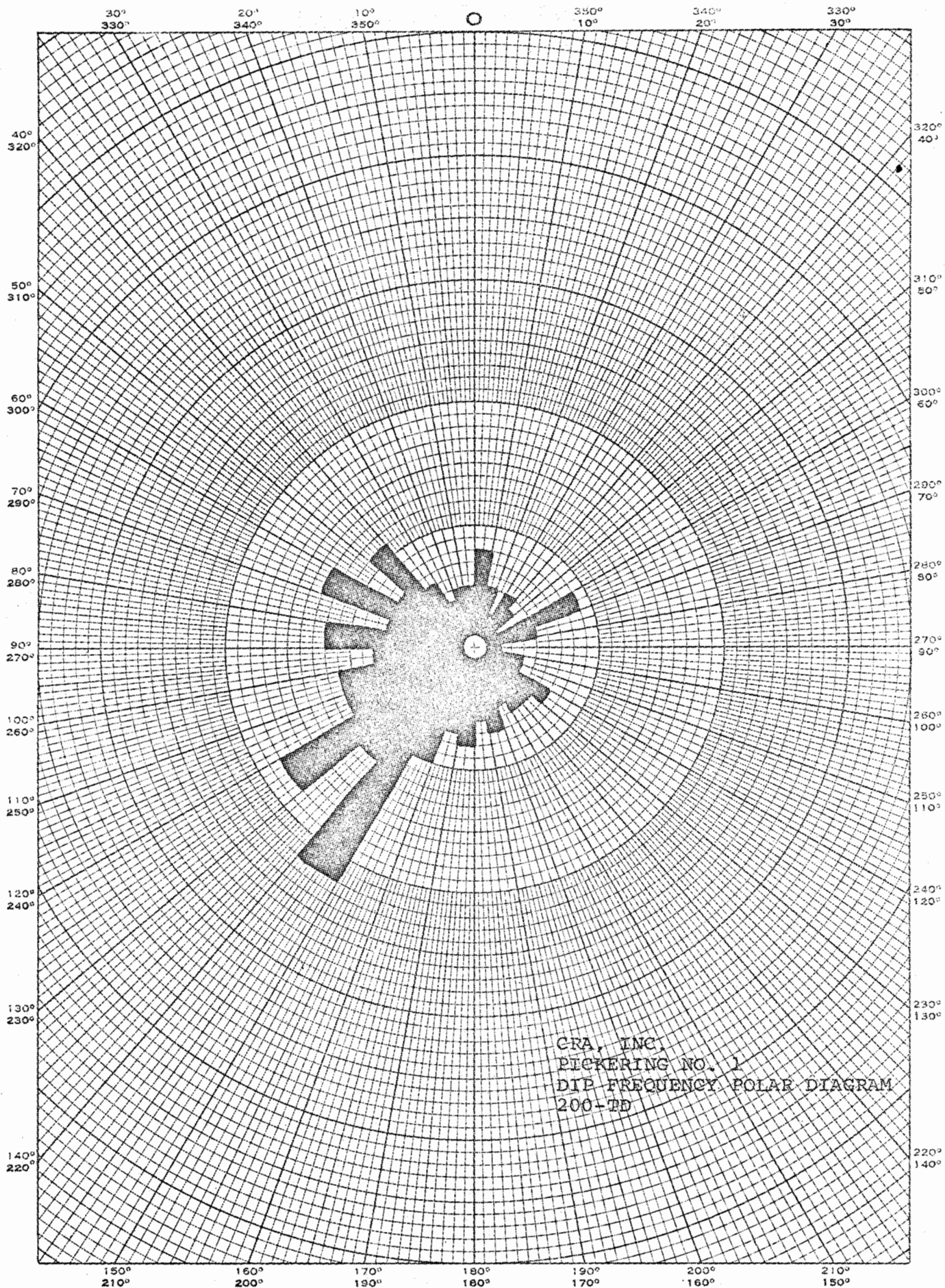
Thank you for calling Schlumberger on this well. If we can be of further assistance, please feel free to call on us at any time.



Sam Fain

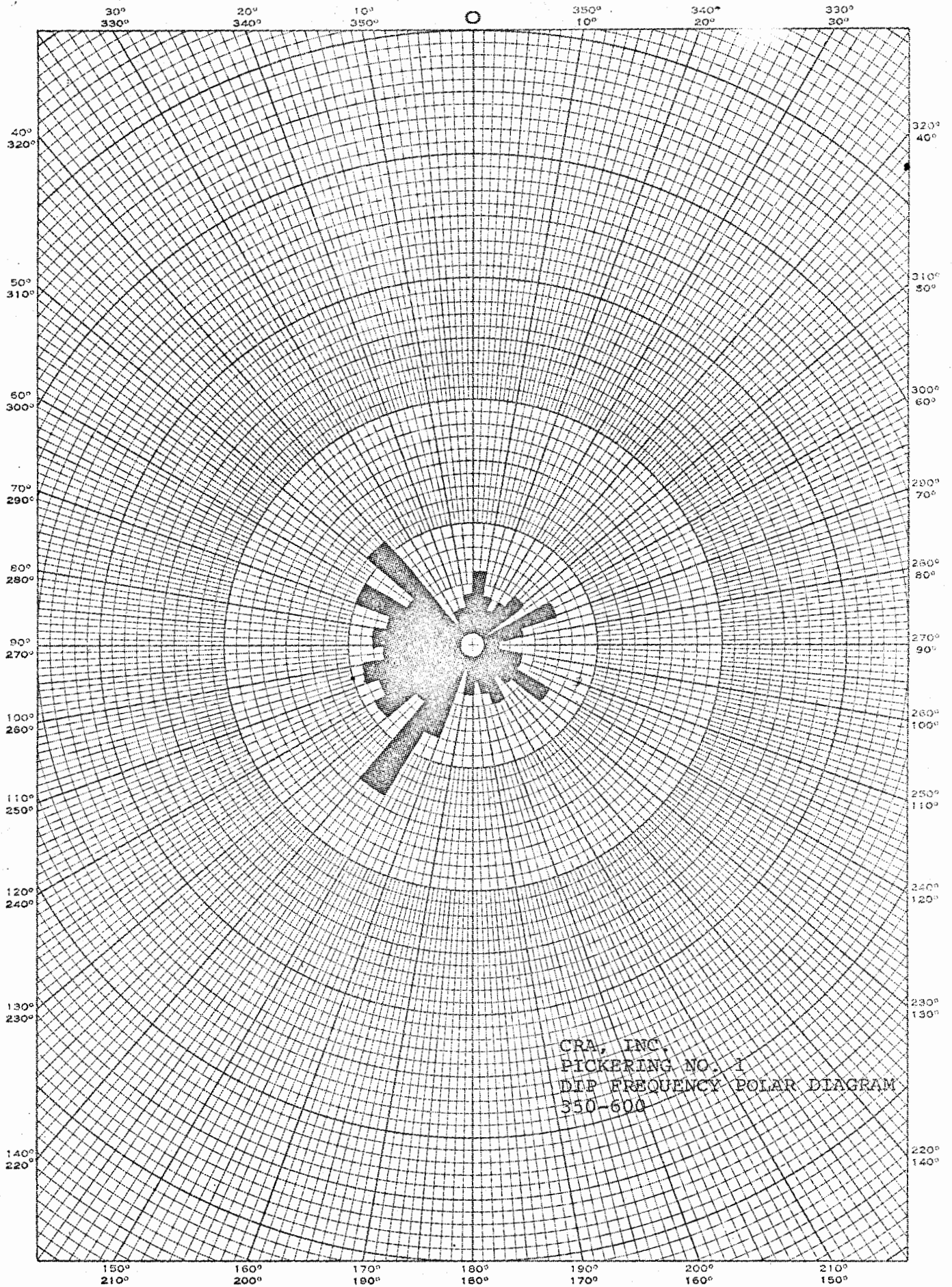
EUGENE DIETZGEN CO.  
MADE IN U. S. A.

NO. 340-P DIETZGEN GRAPH PAPER  
POLAR CO-ORDINATE

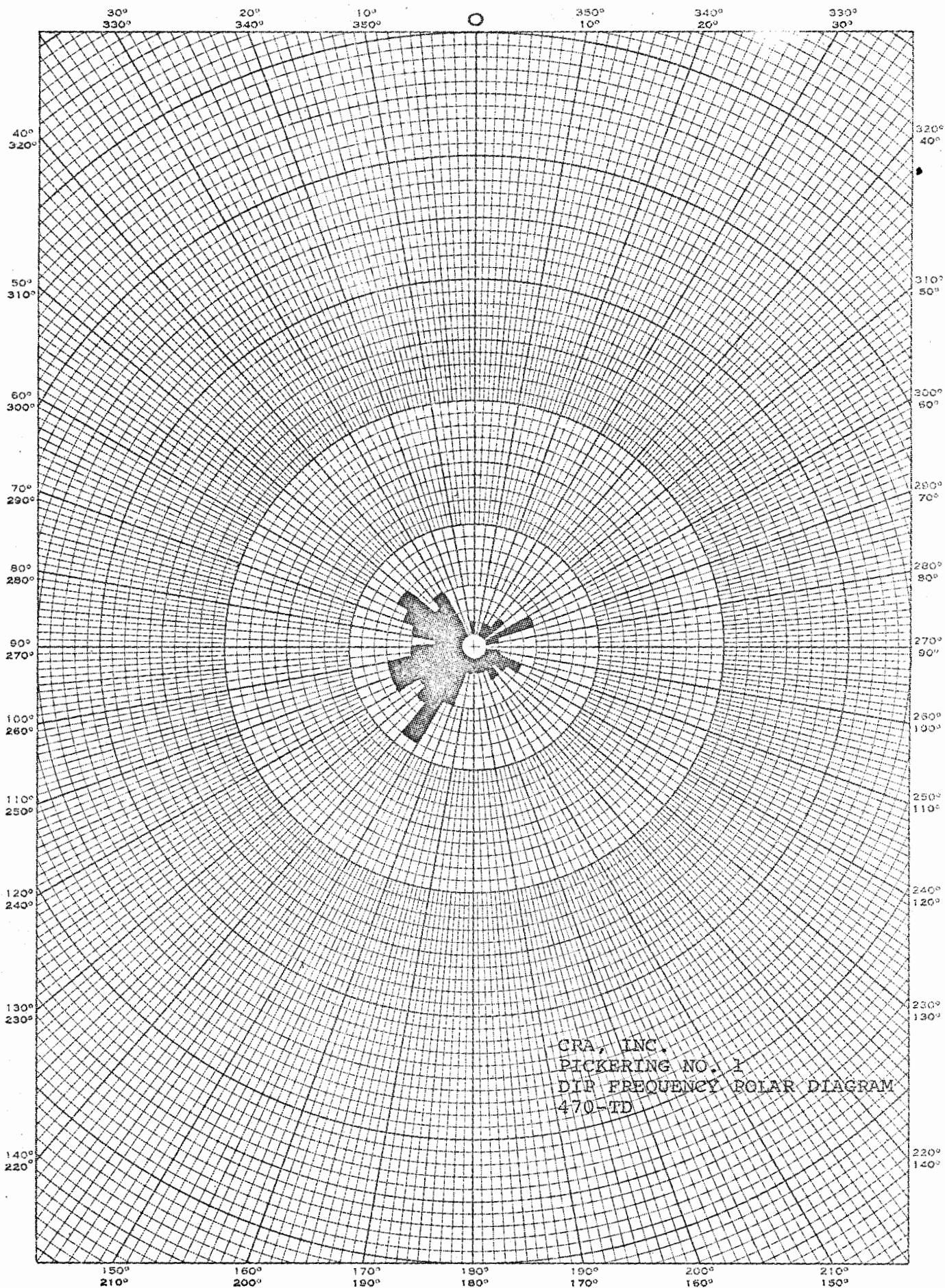


EUGENE DIETZEN CO.  
MADE IN U. S. A.

NO. 340-P DIETZEN GRAPH PAPER  
POLAR CO-ORDINATE

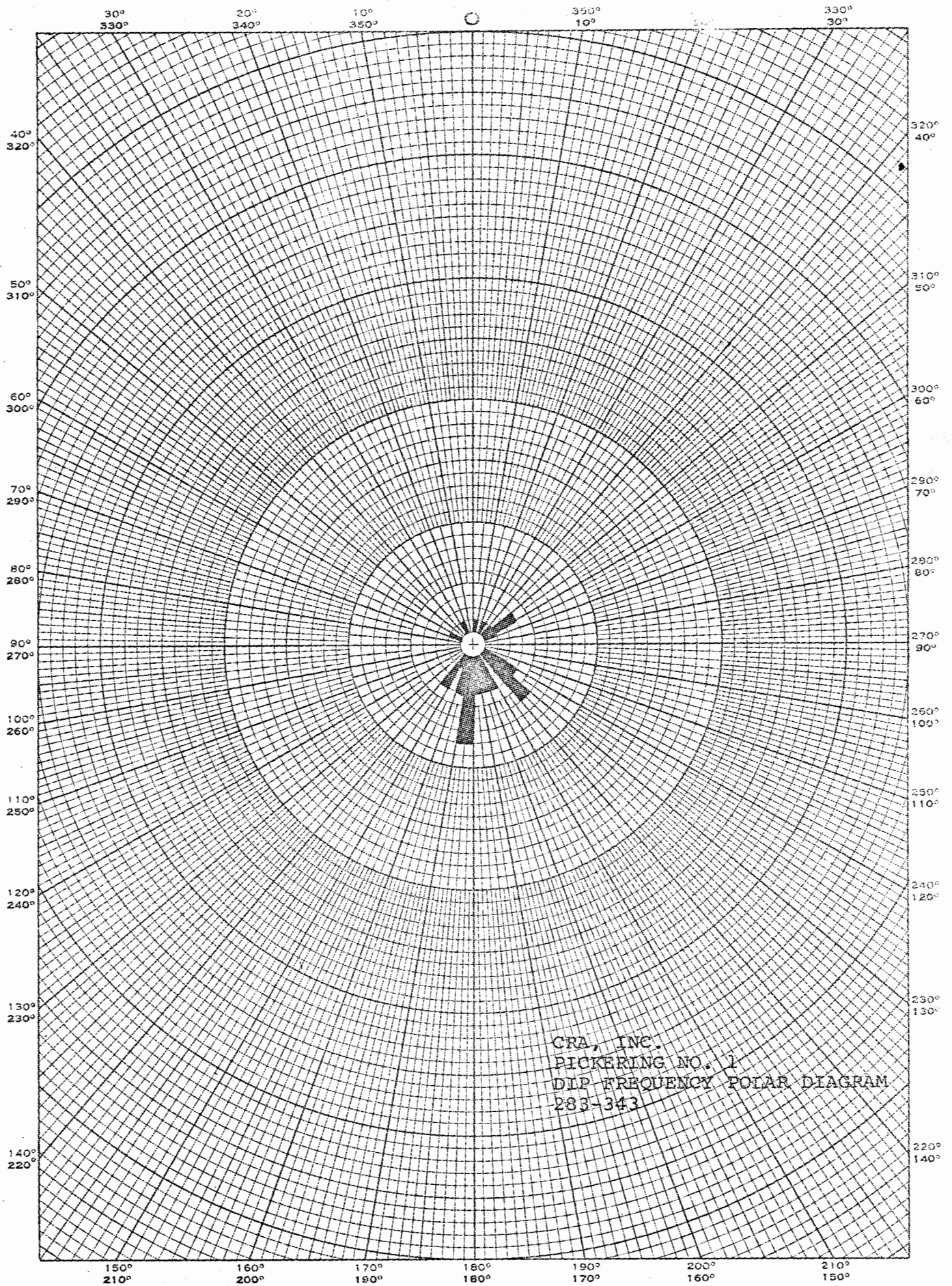


ND. 340-P DIETZEN GRAPH PAPER  
POLAR CO-ORDINATE

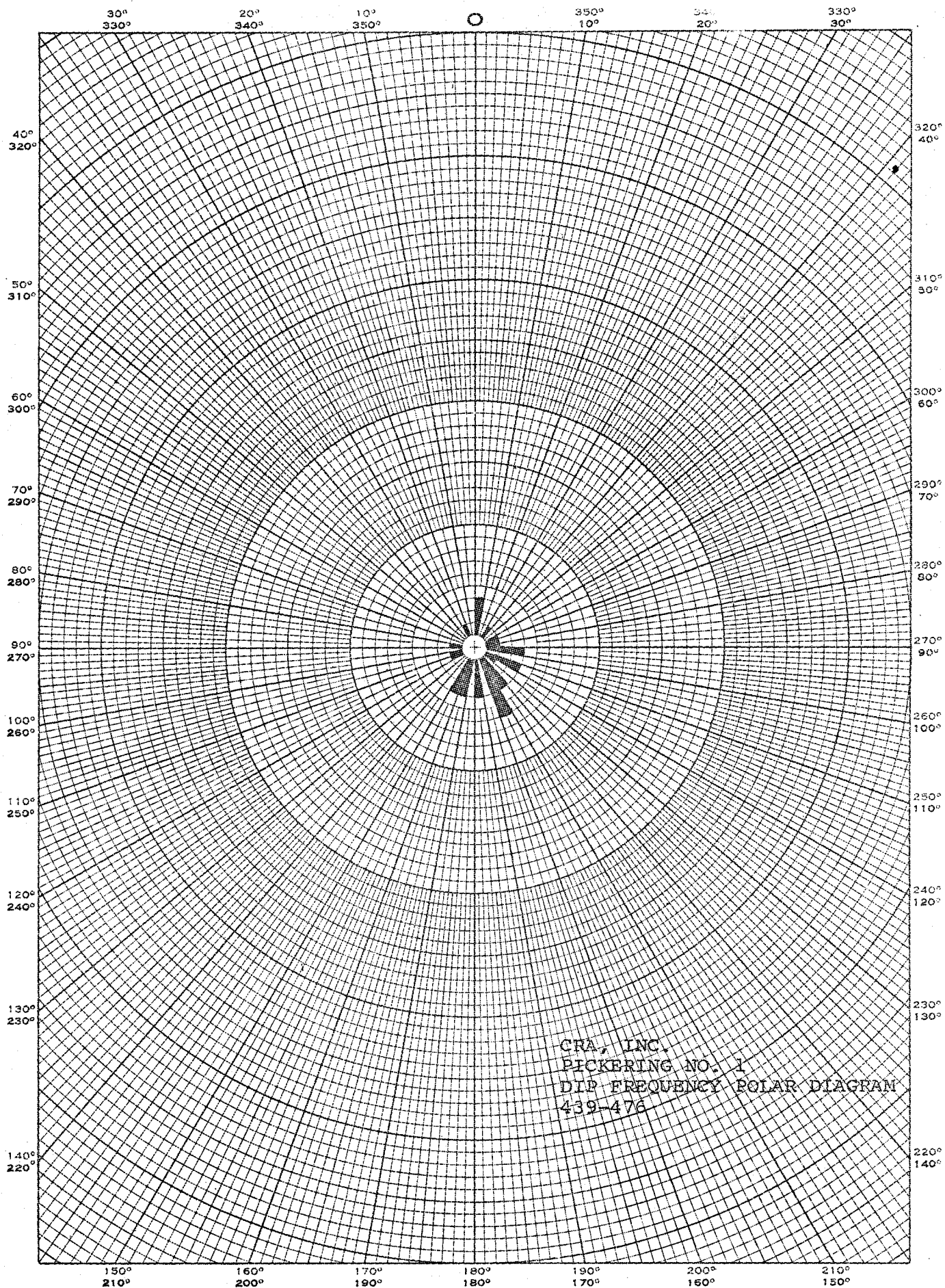


EUGENE DIETZEN CO.  
MADE IN U. S. A.

NO. 340-P DIETZEN GRAPH PAPER  
POLAR CO-ORDINATE



NO. 340-P DIETZEN GRAPH PAPER  
POLAR CO-ORDINATE



SCHLUMBERGER WELL SURVEYING CORPORATION  
CONTINUOUS DIPMETER CALCULATIONS  
ELECTRONIC COMPUTER JOB 390

CRA, INC.  
PICKERING NO.1  
LABETTE CO, KANSAS

|   | DEPTH | DIP  | AZM | BEARING | DEV | AZM |
|---|-------|------|-----|---------|-----|-----|
|   | 200   | 1.0  | 329 | N 31 W  | .8  | 75  |
|   | 201   | 2.7  | 210 | S 30 W  | .8  | 75  |
|   | 203   | 3.6  | 269 | S 89 W  | .8  | 75  |
|   | 204   | 2.6  | 271 | N 89 W  | .8  | 70  |
|   | 205   | 3.6  | 264 | S 84 W  | .8  | 70  |
|   | 209   | 4.2  | 313 | N 47 W  | .8  | 70  |
|   | 210   | 1.9  | 348 | N 12 W  | .8  | 70  |
|   | 212   | 1.6  | 285 | N 75 W  | .8  | 70  |
|   | 213   | 1.6  | 285 | N 75 W  | .8  | 70  |
|   | 215   | .8   | 250 | S 70 W  | .8  | 70  |
|   | 216   | 3.7  | 200 | S 20 W  | .8  | 70  |
|   | 217   | 2.7  | 205 | S 25 W  | .8  | 70  |
|   | 219   | 3.7  | 155 | S 25 E  | .8  | 75  |
|   | 222   | 3.4  | 217 | S 37 W  | .8  | 78  |
|   | 223   | 2.6  | 205 | S 25 W  | .8  | 70  |
|   | 225   | 1.9  | 254 | S 74 W  | .8  | 80  |
|   | 227   | 1.9  | 254 | S 74 W  | .8  | 80  |
|   | 228   | 3.2  | 350 | N 10 W  | .8  | 80  |
|   | 229   | 3.1  | 350 | N 10 W  | .8  | 75  |
|   | 231   | 5.0  | 319 | N 41 W  | .8  | 75  |
|   | 233   | 3.2  | 310 | N 50 W  | .8  | 75  |
|   | 237   | 6.8  | 233 | S 53 W  | .8  | 70  |
|   | 239   | 7.3  | 241 | S 61 W  | .8  | 70  |
|   | 241   | 5.4  | 221 | S 41 W  | .8  | 70  |
|   | 243   | 3.4  | 209 | S 29 W  | .8  | 70  |
|   | 244   | 4.6  | 189 | S 9 W   | .8  | 75  |
|   | 245   | 2.5  | 217 | S 37 W  | .8  | 70  |
|   | 247   | 3.0  | 234 | S 54 W  | .8  | 65  |
|   | 249   | 1.8  | 164 | S 16 E  | .8  | 70  |
|   | 251   | 1.9  | 233 | S 53 W  | .8  | 65  |
|   | 253   | FLAT |     |         |     |     |
|   | 254   | 2.6  | 210 | S 30 W  | .9  | 65  |
|   | 255   | 3.0  | 225 | S 45 W  | .9  | 60  |
|   | 256   | 2.6  | 205 | S 25 W  | .9  | 60  |
|   | 258   | 3.0  | 220 | S 40 W  | .9  | 55  |
|   | 259   | 2.5  | 175 | S 5 E   | .9  | 55  |
|   | 260   | 1.5  | 190 | S 10 W  | .9  | 55  |
|   | 261   | 2.5  | 202 | S 22 W  | .9  | 60  |
|   | 262   | 3.0  | 220 | S 40 W  | .9  | 55  |
|   | 263   | 2.5  | 202 | S 22 W  | .9  | 60  |
|   | 264   | 1.9  | 226 | S 46 W  | .9  | 60  |
|   | 265   | .9   | 240 | S 60 W  | .9  | 60  |
| 6 | 267   | 3.0  | 222 | S 42 W  | .9  | 60  |
|   | 269   | 1.8  | 225 | S 45 W  | .8  | 63  |
| 5 | 270   | 2.9  | 263 | S 83 W  | .8  | 58  |
|   | 271   | 1.8  | 260 | S 80 W  | .8  | 60  |
| 4 | 273   | .8   | 245 | S 65 W  | .8  | 65  |
|   | 275   | 2.4  | 288 | N 72 W  | .8  | 65  |
| 3 | 276   | FLAT |     |         |     |     |
|   | 277   | 2.7  | 333 | N 27 W  | .8  | 60  |
| 2 | 279   | 2.7  | 333 | N 27 W  | .8  | 60  |
|   | 281   | 3.4  | 316 | N 44 W  | .8  | 65  |
|   | 283   | 1.5  | 295 | N 65 W  | .8  | 68  |

|   |     |     |     |        |     |    |
|---|-----|-----|-----|--------|-----|----|
|   | 287 | 1.9 | 330 | N 30 W | .8  | 70 |
|   | 289 | 3.0 | 52  | N 52 E | .8  | 65 |
|   | 291 | 4.3 | 155 | S 25 E | .8  | 65 |
|   | 292 | 1.4 | 133 | S 47 E | .8  | 65 |
|   | 293 | 5.0 | 60  | N 60 E | .8  | 65 |
|   | 295 | 3.0 | 46  | N 46 E | .8  | 65 |
|   | 296 | 2.1 | 57  | N 57 E | .8  | 70 |
|   | 297 | 2.8 | 8   | N 8 E  | .8  | 65 |
|   | 299 | 2.2 | 28  | N 28 E | .8  | 70 |
|   | 300 | 1.4 | 133 | S 47 E | .8  | 65 |
|   | 303 | 2.2 | 161 | S 19 E | .8  | 60 |
|   | 305 | 3.2 | 154 | S 26 E | .8  | 65 |
|   | 306 | 4.5 | 125 | S 55 E | .8  | 50 |
|   | 307 | 4.2 | 164 | S 16 E | .8  | 50 |
|   | 309 | 4.1 | 180 | S      | .8  | 60 |
|   | 311 | 2.8 | 210 | S 30 W | .8  | 60 |
|   | 313 | 3.9 | 208 | S 28 W | .8  | 65 |
|   | 317 | 6.1 | 187 | S 7 W  | .8  | 65 |
|   | 321 | 8.0 | 175 | S 5 E  | .9  | 50 |
|   | 325 | 8.1 | 183 | S 3 W  | .9  | 55 |
|   | 327 | 3.3 | 122 | S 58 E | .9  | 60 |
|   | 329 | 6.3 | 187 | S 7 W  | .9  | 60 |
|   | 333 | 5.6 | 196 | S 16 W | .9  | 60 |
|   | 337 | 3.1 | 175 | S 5 E  | .9  | 60 |
|   | 338 | 1.9 | 217 | S 37 W | .9  | 60 |
|   | 341 | 4.5 | 190 | S 10 W | .9  | 55 |
|   | 343 | 7.5 | 136 | S 44 E | .9  | 50 |
|   | 345 | 5.2 | 175 | S 5 E  | .9  | 50 |
|   | 347 | .9  | 224 | S 44 W | .9  | 45 |
|   | 348 | .9  | 224 | S 44 W | .9  | 45 |
|   | 350 | 4.5 | 276 | N 84 W | .9  | 50 |
|   | 351 | 1.8 | 301 | N 59 W | .9  | 45 |
|   | 353 | 2.8 | 345 | N 15 W | .9  | 50 |
|   | 355 | 3.1 | 297 | N 63 W | .9  | 50 |
|   | 357 | 4.7 | 329 | N 31 W | .9  | 45 |
|   | 359 | 2.8 | 312 | N 48 W | .9  | 45 |
|   | 360 | 4.9 | 302 | N 58 W | .9  | 45 |
|   | 361 | 3.8 | 306 | N 54 W | .9  | 45 |
|   | 362 | 3.8 | 306 | N 54 W | .9  | 47 |
|   | 363 | 1.8 | 194 | S 14 W | .9  | 45 |
|   | 367 | 2.7 | 209 | S 29 W | .9  | 50 |
|   | 368 | 6.5 | 168 | S 12 E | .9  | 45 |
|   | 370 | 1.3 | 51  | N 51 E | .9  | 43 |
|   | 373 | 8.6 | 144 | S 36 E | .9  | 45 |
|   | 374 | 6.8 | 119 | S 61 E | .9  | 45 |
|   | 375 | 7.5 | 128 | S 52 E | .9  | 40 |
|   | 379 | 6.2 | 30  | N 30 E | .9  | 45 |
|   | 381 | 6.7 | 341 | N 19 W | .9  | 45 |
|   | 383 | 5.8 | 301 | N 59 W | .9  | 45 |
|   | 386 | 2.8 | 264 | S 84 W | .9  | 45 |
|   | 387 | 2.0 | 222 | S 42 W | .9  | 45 |
|   | 388 | 4.6 | 256 | S 76 W | .9  | 43 |
|   | 389 | 2.2 | 285 | N 75 W | .9  | 45 |
|   | 391 | 2.0 | 61  | N 61 E | .9  | 37 |
|   | 393 | 3.1 | 350 | N 10 W | .9  | 35 |
|   | 394 | 1.1 | 281 | N 79 W | .9  | 35 |
| 6 | 395 | 1.3 | 26  | N 26 E | .9  | 35 |
| 5 | 397 | 3.5 | 28  | N 28 E | .9  | 35 |
|   | 398 | 1.3 | 18  | N 18 E | .9  | 35 |
| 4 | 399 | 2.1 | 354 | N 6 W  | .9  | 35 |
|   | 400 | 1.4 | 328 | N 32 W | .9  | 40 |
| 3 | 403 | 1.0 | 209 | S 29 W | 1.0 | 30 |
|   | 405 | 1.3 | 359 | N 1 W  | 1.0 | 35 |
| 2 | 406 | 3.1 | 350 | N 10 W | 1.0 | 35 |
|   | 407 | 6.1 | 343 | N 17 W | .9  | 40 |
|   | 408 | 4.2 | 357 | N 3 W  | .9  | 35 |

|   |     |      |     |        |    |    |
|---|-----|------|-----|--------|----|----|
|   | 409 | 9.2  | 55  | N 55 E | .9 | 33 |
|   | 411 | 2.3  | 286 | N 74 W | .9 | 35 |
|   | 413 | 2.5  | 261 | S 81 W | .9 | 40 |
|   | 415 | 2.5  | 261 | S 81 W | .9 | 40 |
|   | 417 | 3.8  | 228 | S 48 W | .9 | 40 |
|   | 418 | 4.1  | 243 | S 63 W | .9 | 40 |
|   | 421 | 11.5 | 206 | S 26 W | .9 | 35 |
|   | 422 | 3.8  | 228 | S 48 W | .9 | 40 |
|   | 423 | 5.6  | 225 | S 45 W | .9 | 40 |
|   | 425 | 1.5  | 267 | S 87 W | .9 | 40 |
|   | 427 | 2.4  | 282 | N 78 W | .9 | 35 |
|   | 428 | 3.0  | 236 | S 56 W | .9 | 35 |
|   | 431 | 1.6  | 118 | S 62 E | .9 | 35 |
|   | 433 | 1.5  | 264 | S 84 W | .9 | 40 |
|   | 435 | 1.8  | 301 | N 59 W | .9 | 40 |
|   | 437 | 1.8  | 296 | N 64 W | .9 | 35 |
|   | 439 | 8.8  | 4   | N 4 E  | .9 | 30 |
|   | 441 | 1.0  | 7   | N 7 E  | .9 | 35 |
|   | 442 | 1.4  | 62  | N 62 E | .9 | 30 |
|   | 443 | 2.3  | 78  | N 78 E | .9 | 25 |
|   | 445 | FLAT |     |        |    |    |
|   | 446 | 1.5  | 97  | S 83 E | .9 | 20 |
|   | 447 | 2.6  | 98  | S 82 E | .9 | 20 |
|   | 449 | 2.4  | 151 | S 29 E | .9 | 20 |
|   | 453 | 4.4  | 156 | S 24 E | .9 | 30 |
|   | 454 | 1.2  | 147 | S 33 E | .9 | 30 |
|   | 455 | 4.4  | 156 | S 24 E | .9 | 30 |
|   | 456 | 4.7  | 192 | S 12 W | .9 | 25 |
|   | 457 | 4.8  | 206 | S 26 W | .9 | 30 |
|   | 459 | 3.4  | 149 | S 31 E | .9 | 20 |
|   | 461 | 3.7  | 179 | S 1 E  | .9 | 23 |
|   | 463 | 2.9  | 129 | S 51 E | .9 | 28 |
|   | 464 | 4.6  | 174 | S 6 E  | .9 | 28 |
|   | 465 | 2.1  | 117 | S 63 E | .9 | 23 |
|   | 466 | 2.0  | 114 | S 66 E | .9 | 25 |
|   | 467 | .8   | 204 | S 24 W | .8 | 25 |
|   | 468 | 2.3  | 86  | N 86 E | .9 | 25 |
|   | 470 | .8   | 199 | S 19 W | .8 | 20 |
|   | 471 | 2.4  | 31  | N 31 E | .9 | 25 |
|   | 472 | 1.3  | 335 | N 25 W | .9 | 35 |
|   | 473 | 2.6  | 251 | S 71 W | .9 | 20 |
|   | 474 | 3.6  | 241 | S 61 W | .9 | 30 |
|   | 476 | 2.1  | 274 | N 86 W | .9 | 30 |
|   | 477 | 1.7  | 306 | N 54 W | .9 | 20 |
|   | 479 | 1.7  | 243 | S 63 W | .9 | 30 |
|   | 480 | 2.9  | 292 | N 68 W | .9 | 30 |
|   | 481 | 3.9  | 302 | N 58 W | .9 | 35 |
|   | 483 | 5.7  | 301 | N 59 W | .9 | 30 |
|   | 484 | 4.7  | 282 | N 78 W | .9 | 15 |
|   | 485 | 3.8  | 286 | N 74 W | .9 | 25 |
|   | 487 | 3.8  | 284 | N 76 W | .9 | 23 |
|   | 489 | 4.7  | 293 | N 67 W | .9 | 28 |
|   | 491 | 3.2  | 270 | W      | .9 | 28 |
|   | 493 | 2.4  | 29  | N 29 E | .9 | 23 |
|   | 495 | 4.9  | 280 | N 80 W | .9 | 28 |
| 6 | 497 | 2.2  | 270 | W      | .9 | 30 |
|   | 498 | 2.0  | 206 | S 26 W | .9 | 35 |
| 5 | 499 | 2.8  | 223 | S 43 W | .9 | 30 |
|   | 501 | 1.7  | 103 | S 77 E | .9 | 30 |
| 4 | 502 | 2.1  | 295 | N 65 W | .9 | 30 |
|   | 505 | 3.3  | 264 | S 84 W | .9 | 30 |
| 3 | 507 | 3.0  | 283 | N 77 W | .9 | 30 |
|   | 509 | 1.8  | 237 | S 57 W | .9 | 30 |
| 2 | 510 | 1.3  | 10  | N 10 E | .9 | 28 |
|   | 511 | .9   | 132 | S 48 E | .9 | 28 |
|   | 513 | 1.6  | 171 | S 9 E  | .9 | 30 |

|     |      |     |        |    |    |
|-----|------|-----|--------|----|----|
| 514 | .9   | 133 | S 47 E | .9 | 30 |
| 515 | 1.1  | 66  | N 66 E | .9 | 30 |
| 518 | 3.9  | 249 | S 69 W | .9 | 30 |
| 520 | 3.7  | 182 | S 2 W  | .9 | 25 |
| 521 | 1.3  | 8   | N 8 E  | .9 | 25 |
| 522 | 1.8  | 234 | S 54 W | .9 | 30 |
| 523 | 2.0  | 201 | S 21 W | .9 | 30 |
| 524 | .9   | 210 | S 30 W | .9 | 30 |
| 525 | 3.8  | 213 | S 33 W | .9 | 30 |
| 527 | 2.6  | 149 | S 31 E | .9 | 25 |
| 529 | 3.1  | 273 | N 87 W | .9 | 25 |
| 532 | 2.8  | 235 | S 55 W | .9 | 20 |
| 533 | 2.9  | 237 | S 57 W | .9 | 25 |
| 534 | 2.8  | 215 | S 35 W | .9 | 25 |
| 536 | 2.0  | 196 | S 16 W | .9 | 25 |
| 537 | 4.1  | 193 | S 13 W | .9 | 25 |
| 539 | 2.5  | 96  | S 84 E | .9 | 20 |
| 541 | 1.5  | 302 | N 58 W | .9 | 20 |
| 542 | 1.3  | 256 | S 76 W | .9 | 20 |
| 543 | 2.6  | 160 | S 20 E | .9 | 15 |
| 544 | .9   | 195 | S 15 W | .9 | 15 |
| 545 | 3.2  | 255 | S 75 W | .9 | 15 |
| 546 | 1.4  | 250 | S 70 W | .9 | 20 |
| 548 | 2.4  | 268 | S 88 W | .9 | 25 |
| 550 | 4.3  | 249 | S 69 W | .9 | 20 |
| 551 | 2.5  | 239 | S 59 W | .9 | 18 |
| 553 | 2.4  | 127 | S 53 E | .9 | 15 |
| 555 | 2.5  | 236 | S 56 W | .9 | 15 |
| 557 | 3.0  | 219 | S 39 W | .9 | 25 |
| 558 | 4.8  | 205 | S 25 W | .9 | 25 |
| 563 | 3.6  | 240 | S 60 W | .9 | 25 |
| 564 | 2.0  | 207 | S 27 W | .9 | 25 |
| 565 | 4.6  | 229 | S 49 W | .9 | 25 |
| 566 | 4.6  | 224 | S 44 W | .9 | 20 |
| 567 | 5.6  | 219 | S 39 W | .9 | 20 |
| 569 | 2.7  | 220 | S 40 W | .9 | 20 |
| 571 | 4.2  | 200 | S 20 W | .9 | 20 |
| 572 | 2.0  | 200 | S 20 W | .9 | 20 |
| 575 | 2.7  | 243 | S 63 W | .9 | 20 |
| 576 | 3.1  | 200 | S 20 W | .9 | 20 |
| 578 | 5.9  | 209 | S 29 W | .9 | 20 |
| 581 | FLAT |     |        |    |    |
| 583 | 4.3  | 117 | S 63 E | .9 | 17 |
| 585 | 4.4  | 111 | S 69 E | .9 | 10 |
| 587 | 4.6  | 52  | N 52 E | .9 | 15 |
| 588 | 2.4  | 34  | N 34 E | .9 | 15 |
| 589 | 9.0  | 54  | N 54 E | .9 | 15 |
| 591 | 5.7  | 50  | N 50 E | .9 | 15 |
| 592 | 2.5  | 59  | N 59 E | .9 | 18 |
| 593 | 3.1  | 100 | S 80 E | .9 | 15 |
| 595 | 3.1  | 100 | S 80 E | .9 | 10 |
| 597 | FLAT |     |        |    |    |

| DEPTH | DIP | AZM | BEARING | DEV | AZM |
|-------|-----|-----|---------|-----|-----|
|-------|-----|-----|---------|-----|-----|

6

5

4

3

2