

ARCO OIL AND GAS CO. (1640)  
WELL: WENSON 14-7-64  
HIST FIELD, OREGON  
SURVEY TYPE: SINGLE SHOT  
SURVEY BY: EASTMAN CHRISTENSEN  
BECL: 19 30 E

VERTICAL SECTION CALCULATED IN PLANE OF PROPOSAL  
DIRECTION: S 41 DEG. 30 MIN. E

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD



**EASTMAN  
CHRISTENSEN**

| MEASURED DEPTH FEET | WRIPT ANGLE U M | WRIPT DIRECTION U M | COURSE LENGTH FEET | TRUE                |                       | VERTICAL SECTION FEET | RECTANGULAR | JUGLEG SEVERITY DG/100FT |
|---------------------|-----------------|---------------------|--------------------|---------------------|-----------------------|-----------------------|-------------|--------------------------|
|                     |                 |                     |                    | VERTICAL DEPTH FEET | VERTICAL SECTION FEET |                       |             |                          |
| 0.                  | 0 0             | 0 0                 | 0.                 | 0.00                | 0.00                  | 0.00                  | 0.00        | 0.00                     |
| 135.                | 1 0             | S 26 0 E            | 135.               | 134.99              | 1.13                  | 1.06 S                | 0.52 E      | 0.74                     |
| 233.                | 3 0             | S 11 0 E            | 98.                | 232.93              | 4.26                  | 4.29 S                | 1.60 E      | 2.07                     |
| 294.                | 5 15            | S 40 0 E            | 61.                | 293.77              | 8.43                  | 8.21 S                | 3.47 E      | 4.92                     |
| 355.                | 8 30            | S 44 0 E            | 61.                | 354.32              | 15.73                 | 13.63 S               | 8.35 E      | 5.30                     |
| 416.                | 11 15           | S 47 0 E            | 61.                | 414.41              | 26.17                 | 20.97 S               | 15.81 E     | 4.58                     |
| 446.                | 12 15           | S 47 0 E            | 60.                | 443.78              | 32.25                 | 25.13 S               | 20.28 E     | 3.33                     |
| 477.                | 13 0            | S 48 0 E            | 31.                | 474.03              | 38.99                 | 29.71 S               | 25.27 E     | 2.52                     |
| 567.                | 17 0            | S 46 0 E            | 90.                | 560.95              | 62.19                 | 45.59 S               | 42.31 E     | 4.43                     |
| 618.                | 20 45           | S 45 0 E            | 91.                | 647.04              | 91.56                 | 66.22 S               | 63.30 E     | 4.14                     |
| 750.                | 25 30           | S 43 0 E            | 92.                | 731.62              | 127.63                | 91.76 S               | 88.84 E     | 5.16                     |
| 842.                | 29 45           | S 44 0 E            | 92.                | 812.12              | 170.23                | 122.18 S              | 118.73 E    | 4.65                     |
| 930.                | 32 15           | S 44 0 E            | 88.                | 888.54              | 215.52                | 154.78 S              | 150.22 E    | 2.81                     |
| 1064.               | 34 30           | S 42 0 E            | 124.               | 992.08              | 283.71                | 204.67 S              | 194.73 E    | 2.02                     |
| 1162.               | 32 0            | S 42 0 E            | 108.               | 1082.40             | 342.92                | 248.67 S              | 236.35 E    | 2.31                     |
| 1230.               | 30 45           | S 42 0 E            | 68.                | 1140.45             | 378.32                | 274.98 S              | 260.04 E    | 1.84                     |
| 1359.               | 31 45           | S 42 0 E            | 129.               | 1250.73             | 445.24                | 324.71 S              | 304.82 E    | 0.70                     |
| 1484.               | 33 15           | S 40 0 E            | 125.               | 1356.16             | 512.39                | 375.39 S              | 348.88 E    | 1.48                     |
| 1603.               | 31 15           | S 36 0 E            | 121.               | 1458.48             | 576.80                | 426.26 S              | 388.62 E    | 2.42                     |
| 1730.               | 28 30           | S 35 0 E            | 125.               | 1566.86             | 638.68                | 476.95 S              | 424.77 E    | 2.24                     |
| 1883.               | 27 30           | S 34 0 E            | 153.               | 1701.93             | 709.92                | 536.14 S              | 465.46 E    | 0.72                     |
| 2144.               | 26 15           | S 32 0 E            | 261.               | 1934.76             | 826.49                | 635.08 S              | 529.71 E    | 0.59                     |
| 2477.               | 21 15           | S 35 0 E            | 333.               | 2239.46             | 939.13                | 746.87 S              | 603.70 E    | 1.54                     |
| 2502.               | 21 15           | S 35 0 E            | 25.                | 2262.76             | 968.13                | 754.29 S              | 608.90 E    | 0.00                     |

STATION AT 2502' N.D. IS PROJECTED

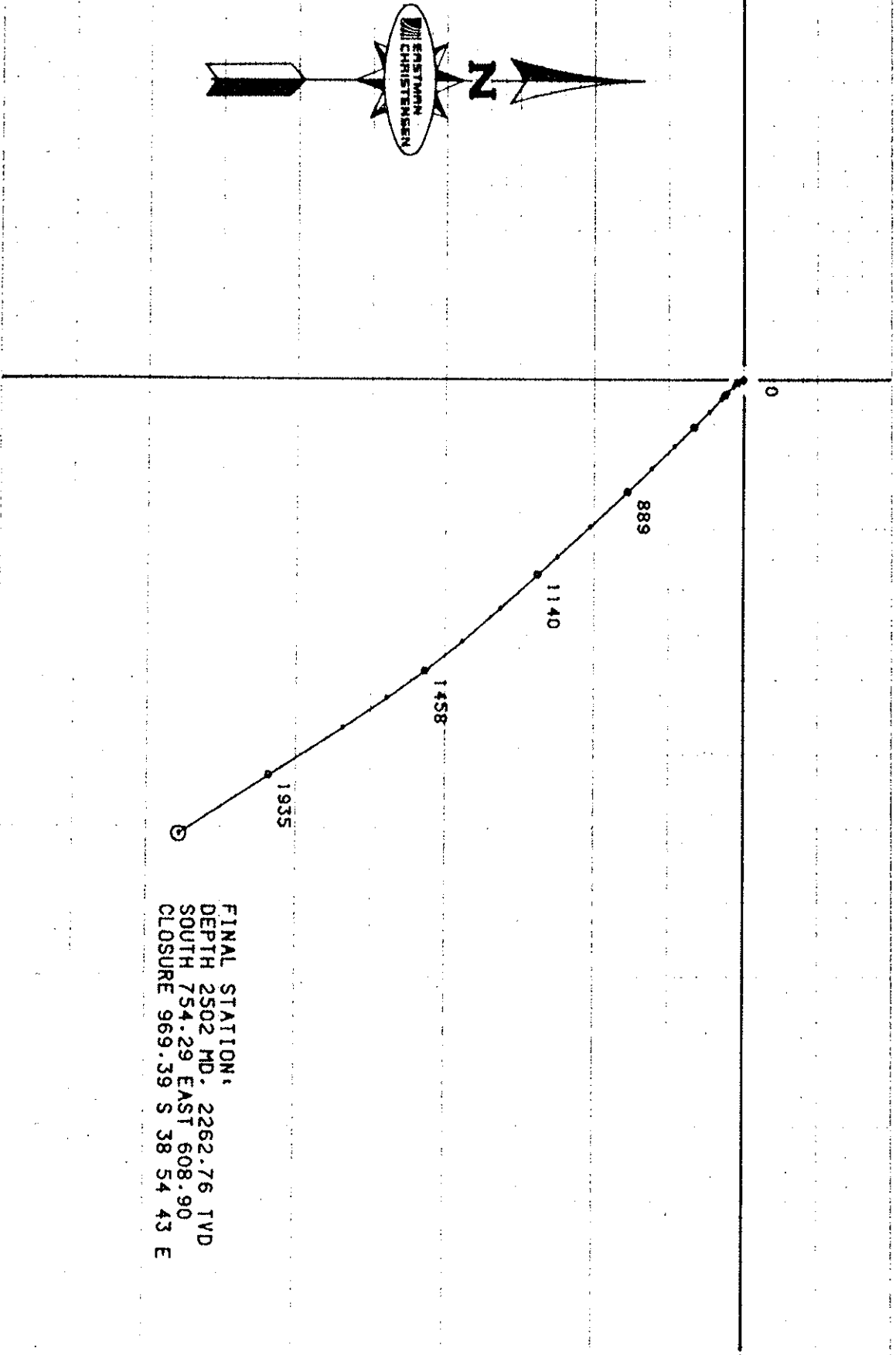
FINAL CLOSURE - DIRECTION: S 38 DEGS 55 MINS E  
 DISTANCE: 969.39 FEET



ARCO OIL AND GAS CO. (1640)  
WELL: BENSON 14-7-64  
MIST FIELD, OREGON

HORIZONTAL PROJECTION  
SCALE 1 IN. = 200 FEET  
DEPTH INDICATOR: TVD

DATA FILE: 81640



FINAL STATION:  
DEPTH 2502 MD, 2262.76 TVD  
SOUTH 754.29 EAST 608.90  
CLOSURE 969.39 S 38 54 43 E