

Initial Deliverability
Test

NEW MEXICO OIL CONSERVATION COMMISSION
GAS WELL TEST DATA SHEET - - SAN JUAN BASIN

(TO BE USED FOR FRUITLAND, PICTURED CLIFFS, MESAVERDE, & ALL DAKOTA
EXCEPT BARKER DOME STORAGE AREA)

Pool Blanco Formation Mesa Verde County San Juan
Purchasing Pipeline Pacific Northwest Pipeline Corporation Date Test Filed January 7, 1957
Operator Pacific Northwest Pipeline Lease San Juan Unit 32-8 Well No. 16-15
Unit M Sec. 15 Twp. 31 Rge. 8 Pay Zone: From 9260 To 5788
Casing: OD 5 1/2 WT. 15.5 Set At 5830 Tubing: OD 2 3/8 WT. 4.7 T. Perf. 5744
Produced Through: Casing - Tubing x Gas Gravity: Measured .650 Estimated -
Date of Flow Test: From 11-28-56 To 11-28-56 Date S.I.P. Measured 7-19-56
Meter Run Size - Orifice Size - Type Chart - Type Taps -

OBSERVED DATA

Flowing casing pressure (Dwt) - psig + 12 = - psia (a)
Flowing tubing pressure (Dwt) - psig + 12 = - psia (b)
Flowing meter pressure (Dwt) - psig + 12 = - psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken:
Normal chart reading - psig + 12 = - psia (d)
Square root chart reading (-) ² x spring constant - = - psia (d)
Meter error (c) - (d) or (d) - (c) ± = - psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing - = - psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading - psig + 12 = - psia (g)
Square root chart average reading (-) ² x sp. const. - = 532 psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) - = 532 psia (h)
P_t = (h) + (f) - = 532 psia (i)
Wellhead casing shut-in pressure (Dwt) 1042 psig + 12 = 1054 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1042 psig + 12 = 1054 psia (k)
P_c = (j) or (k) whichever well flowed through - = 1054 psia (l)
Flowing Temp. (Meter Run) 63 °F + 460 - = 523 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) - = 527 psia (n)

FLOW RATE CALCULATION

Q = 908 X $\left(\frac{\sqrt{(c)}}{\sqrt{(d)}} \right) = \text{MCF/da}$
(integrated)

DELIVERABILITY CALCULATION

D = Q 908 $\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_d^2} \right] = \frac{8131.57}{8109.47} \times (1.0279)^{.75} = 1.0209 = \text{927 MCF/da.}$

SUMMARY

P_c = 1054 psia
Q = 908 Mcf/day
P_w = 548 psia
P_d = 527 psia
D = 927 Mcf/day

Company Pacific Northwest Pipeline Corporation
By Donald E. Adams
Title Well Test Engineer
Witnessed by -
Company -

- * This is date of completion test.
- * Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

GL	(1-e ^{-S})	(F _c Q) ²	(F _c Q) ² (1-e ^{-S}) R ²	P _t ² (Column i)	P _t R ²	P
3734	.238	72880	17345	283024	300369	548

3-N.M.O.C.C.-Agtee
2-Phillips Petroleum-Wayne Smith
1-L.G. Truby
1-File

OK



1. *What is the purpose of the study?* The purpose of the study is to determine the effect of the use of a mobile learning application on the learning outcomes of students in the field of mathematics.

SECRET

1-1 1-2 1-3 1-4 1-5 1-6 1-7 1-8 1-9 1-10 1-11 1-12 1-13 1-14 1-15 1-16 1-17 1-18 1-19 1-20 1-21 1-22 1-23 1-24 1-25 1-26 1-27 1-28 1-29 1-30 1-31 1-32 1-33 1-34 1-35 1-36 1-37 1-38 1-39 1-40 1-41 1-42 1-43 1-44 1-45 1-46 1-47 1-48 1-49 1-50 1-51 1-52 1-53 1-54 1-55 1-56 1-57 1-58 1-59 1-60 1-61 1-62 1-63 1-64 1-65 1-66 1-67 1-68 1-69 1-70 1-71 1-72 1-73 1-74 1-75 1-76 1-77 1-78 1-79 1-80 1-81 1-82 1-83 1-84 1-85 1-86 1-87 1-88 1-89 1-90 1-91 1-92 1-93 1-94 1-95 1-96 1-97 1-98 1-99 1-100 1-101 1-102 1-103 1-104 1-105 1-106 1-107 1-108 1-109 1-110 1-111 1-112 1-113 1-114 1-115 1-116 1-117 1-118 1-119 1-120 1-121 1-122 1-123 1-124 1-125 1-126 1-127 1-128 1-129 1-130 1-131 1-132 1-133 1-134 1-135 1-136 1-137 1-138 1-139 1-140 1-141 1-142 1-143 1-144 1-145 1-146 1-147 1-148 1-149 1-150 1-151 1-152 1-153 1-154 1-155 1-156 1-157 1-158 1-159 1-160 1-161 1-162 1-163 1-164 1-165 1-166 1-167 1-168 1-169 1-170 1-171 1-172 1-173 1-174 1-175 1-176 1-177 1-178 1-179 1-180 1-181 1-182 1-183 1-184 1-185 1-186 1-187 1-188 1-189 1-190 1-191 1-192 1-193 1-194 1-195 1-196 1-197 1-198 1-199 1-200 1-201 1-202 1-203 1-204 1-205 1-206 1-207 1-208 1-209 1-210 1-211 1-212 1-213 1-214 1-215 1-216 1-217 1-218 1-219 1-220 1-221 1-222 1-223 1-224 1-225 1-226 1-227 1-228 1-229 1-230 1-231 1-232 1-233 1-234 1-235 1-236 1-237 1-238 1-239 1-240 1-241 1-242 1-243 1-244 1-245 1-246 1-247 1-248 1-249 1-250 1-251 1-252 1-253 1-254 1-255 1-256 1-257 1-258 1-259 1-260 1-261 1-262 1-263 1-264 1-265 1-266 1-267 1-268 1-269 1-270 1-271 1-272 1-273 1-274 1-275 1-276 1-277 1-278 1-279 1-280 1-281 1-282 1-283 1-284 1-285 1-286 1-287 1-288 1-289 1-290 1-291 1-292 1-293 1-294 1-295 1-296 1-297 1-298 1-299 1-300 1-301 1-302 1-303 1-304 1-305 1-306 1-307 1-308 1-309 1-310 1-311 1-312 1-313 1-314 1-315 1-316 1-317 1-318 1-319 1-320 1-321 1-322 1-323 1-324 1-325 1-326 1-327 1-328 1-329 1-330 1-331 1-332 1-333 1-334 1-335 1-336 1-337 1-338 1-339 1-340 1-341 1-342 1-343 1-344 1-345 1-346 1-347 1-348 1-349 1-350 1-351 1-352 1-353 1-354 1-355 1-356 1-357 1-358 1-359 1-360 1-361 1-362 1-363 1-364 1-365 1-366 1-367 1-368 1-369 1-370 1-371 1-372 1-373 1-374 1-375 1-376 1-377 1-378 1-379 1-380 1-381 1-382 1-383 1-384 1-385 1-386 1-387 1-388 1-389 1-390 1-391 1-392 1-393 1-394 1-395 1-396 1-397 1-398 1-399 1-400 1-401 1-402 1-403 1-404 1-405 1-406 1-407 1-408 1-409 1-410 1-411 1-412 1-413 1-414 1-415 1-416 1-417 1-418 1-419 1-420 1-421 1-422 1-423 1-424 1-425 1-426 1-427 1-428 1-429 1-430 1-431 1-432 1-433 1-434 1-435 1-436 1-437 1-438 1-439 1-440 1-441 1-442 1-443 1-444 1-445 1-446 1-447 1-448 1-449 1-450 1-451 1-452 1-453 1-454 1-455 1-456 1-457 1-458 1-459 1-460 1-461 1-462 1-463 1-464 1-465 1-466 1-467 1-468 1-469 1-470 1-471 1-472 1-473 1-474 1-475 1-476 1-477 1-478 1-479 1-480 1-481 1-482 1-483 1-484 1-485 1-486 1-487 1-488 1-489 1-490 1-491 1-492 1-493 1-494 1-495 1-496 1-497 1-498 1-499 1-500 1-501 1-502 1-503 1-504 1-505 1-506 1-507 1-508 1-509 1-510 1-511 1-512 1-513 1-514 1-515 1-516 1-517 1-518 1-519 1-520 1-521 1-522 1-523 1-524 1-525 1-526 1-527 1-528 1-529 1-530 1-531 1-532 1-533 1-534 1-535 1-536 1-537 1-538 1-539 1-540 1-541 1-542 1-543 1-544 1-545 1-546 1-547 1-548 1-549 1-550 1-551 1-552 1-553 1-554 1-555 1-556 1-557 1-558 1-559 1-560 1-561 1-562 1-563 1-564 1-565 1-566 1-567 1-568 1-569 1-570 1-571 1-572 1-573 1-574 1-575 1-576 1-577 1-578 1-579 1-580 1-581 1-582 1-583 1-584 1-585 1-586 1-587 1-588 1-589 1-590 1-591 1-592 1-593 1-594 1-595 1-596 1-597 1-598 1-599 1-600 1-601 1-602 1-603 1-604 1-605 1-606 1-607 1-608 1-609 1-610 1-611 1-612 1-613 1-614 1-615 1-616 1-617 1-618 1-619 1-620 1-621 1-622 1-623 1-624 1-625 1-626 1-627 1-628 1-629 1-630 1-631 1-632 1-633 1-634 1-635 1-636 1-637 1-638 1-639 1-640 1-641 1-642 1-643 1-644 1-645 1-646 1-647 1-648 1-649 1-650 1-651 1-652 1-653 1-654 1-655 1-656 1-657 1-658 1-659 1-660 1-661 1-662 1-663 1-664 1-665 1-666 1-667 1-668 1-669 1-670 1-671 1-672 1-673 1-674 1-675 1-676 1-677 1-678 1-679 1-680 1-681 1-682 1-683 1-684 1-685 1-686 1-687 1-688 1-689 1-690 1-691 1-692 1-693 1-694 1-695 1-696 1-697 1-698 1-699 1-700 1-

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1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1997).

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Figure 1

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