

In Lieu of
Form 3160-4
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE

(See other
instructions on
reverse side)

FORM APPROVED
OMB NO. 1004-0137
Expires: February 28, 1995

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐		14. PERMIT NO.		DATE ISSUED	
b. TYPE OF COMPLETION: NEW WELL ☒ WORKOVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER ☐		18. ELEVATIONS (DK, RKB, RT, GR, ETC.)* 6385' GR		19. ELEVATION CASINGHEAD 6385'	
2. NAME OF OPERATOR NORTHWEST PIPELINE CORPORATION		22. IF MULTICOMP., HOW MANY 2		23. INTERVALS DRILLED BY -----	
3. ADDRESS AND TELEPHONE NO. P.O. BOX 58900 MS 2M3 SALT LAKE CITY, UTAH 84158-0900 (801) 584-6981		24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)* WILDCAT; ROSA PICTURED CLIFFS 3227' TO 3332'		25. WAS DIRECTIONAL SURVEY MADE YES	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* 823' FNL & 1139' FWL At Surface At top production interval reported below At total depth		26. TYPE ELECTRIC AND OTHER LOGS RUN CASED HOLE: GR/CCL/CBL PND-S OPEN HOLE: GR/IES/CDL/CNL		27. WAS WELL CORED NO	
15. DATE SPUDDED 07/17/94		16. DATE T.D. REACHED 07/26/94		17. DATE COMPLETED (READY TO PRODUCE) 10/01/94	
20. TOTAL DEPTH, MD & TVD 6084'		21. PLUG, BACK T.D., MD & TVD 6060'		ROTARY TOOLS X	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)* WILDCAT; ROSA PICTURED CLIFFS 3227' TO 3332'		25. WAS DIRECTIONAL SURVEY MADE YES		27. WAS WELL CORED NO	

28. CASING REPORT (Report all strings set in well)							
CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD			AMOUNT PULLED
9-5/8" K-55	36#	527'	12-1/4"	285 SX	327 cu.ft.	SURFACE	
7" K-55	20#	3657'	8-3/4"	560 SX	1079 cu.ft.	SURFACE	

29. LINER RECORD				30. TUBING RECORD			
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
4-1/2" K-55	3564'	6084'	245 SX (424 cu.ft.)		1-1/2" 2.9#	3343'	4011'

31. PERFORMANCE RECORD (Interval, size, and number) 3227' TO 3243', 3259' TO 3285', 3271' TO 3275', 3284' TO 3318', 3326' TO 3332'. TOTAL OF 38 .36" DIA HOLES.				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
				DEPTH INTERVAL (MD)		AMOUNT AND KIND OF MATERIAL USED	
				3227'	3332'	111,900# 20/40 SAND	23,898 GALS 30# X-LINK IN 70 QUALITY FOAM

33. PRODUCTION							
DATE OF FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping-size and type of pump) FLOWING				WELL STATUS (PRODUCING OR SHUT IN) SHUT IN	
DATE OF TEST 10/04/94	HOURS TESTED 4	CHOKE SIZE 2"	PROD'N FOR TEST PERIOD-----	OIL - BBL. 0	GAS - MCF 229	WATER - BBL. 0	GAS-OIL RATIO N/A
FLOW TUBING PRESS N/A	CASING PRESSURE 550#	CALCULATED 24-HOUR RATE----- 4 HR. PITOT TEST		OIL - BBL. 0	GAS - MCF 1,374	WATER - BBL. N/A	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TO BE SOLD	TEST WITNESSED BY GEORGE BRYAN
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35. LIST OF ATTACHMENTS: LOGS, SUMMARY OF POROUS ZONES, & WELLBORE DIAGRAM

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

SIGNED KATHY BARNEY *Kathy Barney* TITLE SR. OFFICE ASSISTANT DATE October 5, 1994

*(See Instructions and Spaces for Additional Data on Reverse Side)
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

FARMINGTON DISTRICT OFFICE

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals, and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries);

38.

GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP		
					NAME	MEASURED DEPTH	TRUE VERTICAL DEPTH
<u>NACIMIENTO</u>	<u>SURFACE</u>						
OJO ALAMO	2378'	2487'					
KIRTLAND	2487'	2993'					
FRUITLAND	2993'	3226'					
PICTURED CLIFFS	3226'	3543'					
LEWIS	3543'	5346'					
CLIFF HOUSE	5346'	5444'					
MENEFEE	5444'	5674'					
POINT LOOKOUT	5674'	5904'					
MANCOS	5904'	N/A					
TD							

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b. TYPE OF COMPLETION: NEW WELL ☒ WORKOVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. WELL ☐ OTHER ☐		OTHER ☐	
2. NAME OF OPERATOR NORTHWEST PIPELINE CORPORATION			
3. ADDRESS AND TELEPHONE NO. P.O. BOX 58900 MS 2M3 SALT LAKE CITY, UTAH 84158-0900 (801) 584-6981			
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements). 823' FNL & 1139' FWL At Surface At top production interval reported below At total depth			
15. DATE SPUDDED 07/17/94		16. DATE T.D. REACHED 07/26/94	
17. DATE COMPLETED (READY TO PRODUCE) 10/01/94		18. ELEVATIONS (DK, RKB, RT, GR, ETC.) * 6385' GR	
20. TOTAL DEPTH, MD & TVD 6084'		21. PLUG, BACK T.D., MD & TVD 6060'	
22. IF MULTICOMP., HOW MANY 2		23. INTERVALS DRILLED BY +++++	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD) * BLANCO MESAVERDE 5410' TO 5900'			
25. WAS DIRECTIONAL SURVEY MADE YES			
26. TYPE ELECTRIC AND OTHER LOGS RUN CASED HOLE: GR/CCL/CBL OPEN HOLE: GR/ES/CDL/SNL			
27. WAS WELL CORED NO			

28. CASING REPORT (Report all strings set in well)							
CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD			AMOUNT PULLED
9-5/8" K-55	36#	527'	12-1/4"	285 SX	327 cu.ft.	SURFACE	
7" K-55	20#	3657'	8-3/4"	560 SX	1079 cu.ft.	SURFACE	
29. LINER RECORD							
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
4-1/2" K-55	3564'	6084'	245 SX (424 cu.ft.)		1-1/2" 2.9#	5897'	4011'
31. PERFORMANCE RECORD (Interval, size, and number)				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
1ST STAGE: 5675', 78', 81', 84', 87', 90', 93', 96', 5716', 17', 30', 33', 36', 39', 42', 45', 48', 61', 64', 67', 75', 78', 81', 84', 87', 97', 5800', 03', 06', 09', 12', 31', 91', 94', 97', 5900'. TOTAL 36 .36" DIA HOLES				DEPTH INTERVAL (MD)			
2ND STAGE: 5410', 12', 14', 17', 20', 22', 49', 59', 61', 67', 69', 81', 83', 97', 99', 5501', 25', 83', 85', 87', 89', 91', 5617', 25', 27', 29', 31', 35', 43', 48', 61', 65'. TOTAL OF 32 .36" DIA HOLES.				AMOUNT AND KIND OF MATERIAL USED			
				5675'	5900'	90,920# 20/40 SAND	115,668 GALS OF SLICK WATER
				5410'	5665'	66,200# 20/40 SAND	86,394 GALS OF SLICK WATER

33. PRODUCTION							
DATE OF FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping-size and type of pump) FLOWING				WELL STATUS (PRODUCING OR SHUT IN) SHUT IN	
DATE OF TEST 10/04/94	HOURS TESTED 2	CHOKE SIZE 2"	PROD'N FOR TEST PERIOD+++++	OIL - BBL. 0	GAS - MCF 231	WATER - BBL. 0	GAS-OIL RATIO N/A
FLOW TUBING PRESS N/A	CASING PRESSURE N/A	CALCULATED 24-HOUR RATE++++ 2 HR. PITOT TEST		OIL - BBL. 0	GAS - MCF 2,774	WATER - BBL. N/A	OIL GRAVITY-API (CORR.)
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TO BE SOLD						TEST WITNESSED BY GEORGE BRYAN	
35. LIST OF ATTACHMENTS: LOGS, SUMMARY OF POROUS ZONES, & WELLBORE DIAGRAM							

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED **KATHY BARNEY**

TITLE **SR-OFFICE ASSISTANT** DATE **October 5, 1994**

*(See Instructions and Spaces for Additional Data on Reverse Side)

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FARMINGTON DISTRICT OFFICE

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP		
					NAME	MEASURED DEPTH	TRUE VERTICAL DEPTH
<u>NACIMIENTO</u>							
OJO ALAMO	2378'	2487'					
KIRTLAND	2487'	2993'					
FRUITLAND	2993'	3226'					
PICTURED CLIFFS	3226'	3543'					
LEWIS	3543'	5346'					
CLIFF HOUSE	5346'	5444'					
MENELEE	5444'	5674'					
POINT LOOKOUT	5674'	5904'					
MANCOS	5904'	N/A					
TD							

WELLBORE DIAGRAM ROSA UNIT #145A PC/MV

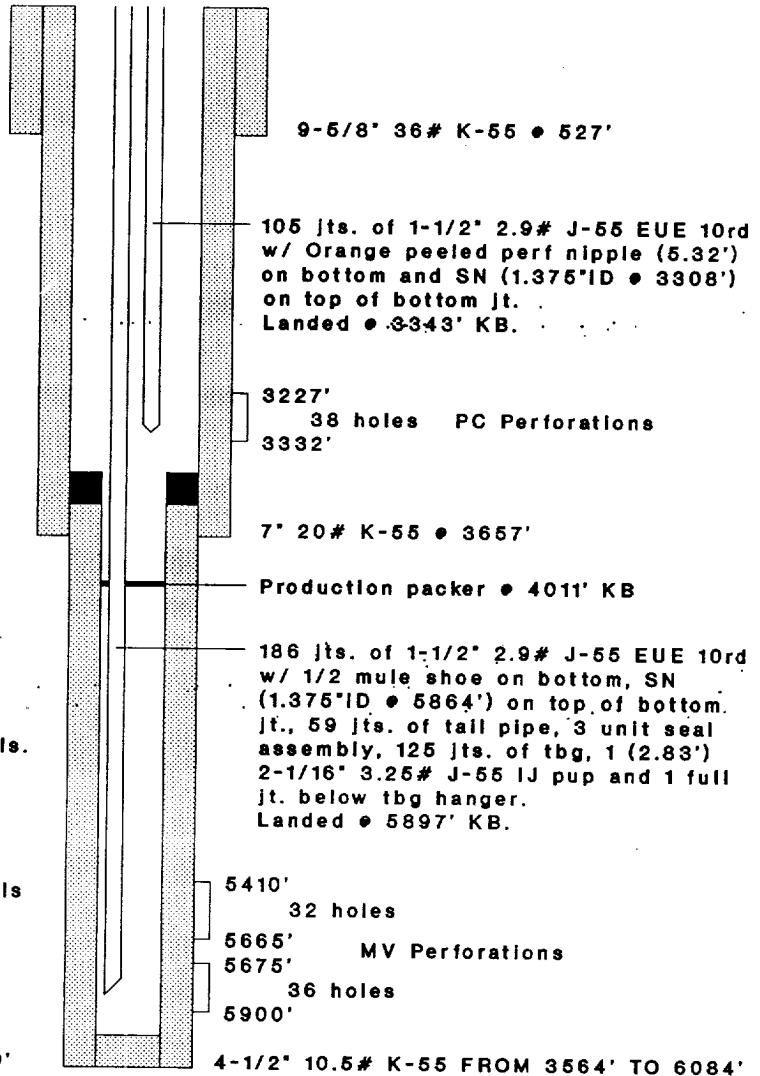
LOCATION: 823'FNL, 1139'FWL
NW/4 NW/4 SEC. 16, T31N, R6W
SAN JUAN, Co., NM
ELEVATION: 6385' GR
KB: 12'

TOPS:

NACIMIENTO	N/A
OJO ALAMO	2378'
KIRTLAND	2487'
FRUITLAND	2993'
PICTURED CLIFFS	3226'
LEWIS	3543'
CLIFF HOUSE	5346'
MENEFEE	5444'
POINT LOOKOUT	5674'
MANCOS	5904'

STIMULATION

PC: 3227' to 3243'
111,900# of 20/40 sand in 23,898 gals.
of 30# X-Link gel in a 70 qual foam
MV: 5410' to 5665'
66,200# 20/40 sand in 86,394 gals
of slick water.
MV: 5675' to 5900'
90,920# of 20/40 sand in 115,668 gals
of slick water.

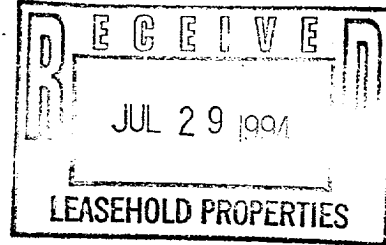


HOLE SIZE	CASING	CEMENT	VOLUME	TOP OF CMT
12-1/4"	9-5/8" 36#	285 SX	327 CU.FT.	SURFACE
8-3/4"	7" 20#	560 SX	1079 CU.FT.	SURFACE
6-1/4"	4-1/2" 10.5#	245 SX	424 CU.FT.	LINER TOP

FOUR CORNERS DRILLING CO.

P. O. BOX 1067
5651 U.S. HWY. 64
FARMINGTON, NEW MEXICO 87499

TELEPHONE: (505) 326-3371
FAX: (505) 326-3370



July 26, 1994

Williams Production Company
Mr. Mark McAllister
295 Chipeta Way
Salt Lake City, UT 84108

RE: Deviation report on the Rosa Unit 145 A,
Section 16, Township 31 N, Range 6 W
San Juan County, New Mexico

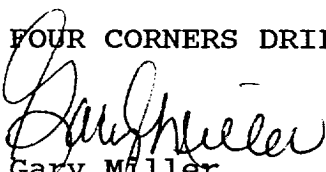
Gentlemen:

Below is the deviation report for your Rosa Unit 145 A Well.

125'	$\frac{1}{2}^{\circ}$
234'	$\frac{3}{4}^{\circ}$
509'	$\frac{3}{4}^{\circ}$
752'	$1\frac{3}{4}^{\circ}$
842'	$1\frac{3}{4}^{\circ}$
969'	$1\frac{1}{4}^{\circ}$
1467'	1°
1994'	$\frac{3}{4}^{\circ}$
2495'	1°
2989'	$\frac{3}{4}^{\circ}$
3624'	$\frac{3}{4}^{\circ}$
3882'	$\frac{3}{4}^{\circ}$
4382'	1°
4821'	3°
4946'	$2\frac{3}{4}^{\circ}$
5103'	$2\frac{3}{4}^{\circ}$
5355'	$2\frac{1}{2}^{\circ}$
5854'	2°
6085'	$1\frac{3}{4}^{\circ}$

Sincerely,

FOUR CORNERS DRILLING COMPANY


Gary Miller
Drilling Superintendent

GM/tdd

July 26, 1994
Rosa Unit 145 A
PAGE 2

Acknowledgement

State of New Mexico)
) s.s.
County of San Juan)

The foregoing instrument was acknowledge before me this 26th day of July, 1994, by Gary Miller.

Mike Paschall
Notary

Notary Public

My Commission Expires : 8-27-94
(seal)