TABULATION OF DEVIATION SURVEYS

BHP PETROLEUM (AMERICAS) INC.
GALLEGOS CANYON UNIT NO. 503
API NO. 30-045-28064

DEPTH	DEVIATION
733'	1/2°
1585'	3/4°

AFFIDAVIT

This is to certify that to the best of my knowledge the above tabulation details the deviation tests taken in the BHP PETROLEUM (AMERICAS) INC.'S Gallegos Canyon Unit No. 503 located 1265' FSL & 1850' FEL of Section 18, T29N-R12W in San Juan County, New Mexico.

Signed Beverly Comer
Beverly Comer

THE STATE OF TEXAS)
) SS.
COUNTY OF HARRIS)

BEFORE ME, the undersigned authority, on this day personally appeared Beverly Comer known to me to be Production Technician for BHP Petroleum (Americas) Inc. and to be the person whose name is subscribed to the above statement, who, being by me duly sworn on oath, states that he has knowledge of the facts stated herein and that said statement is true and correct.

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for said County and State this 10th day of April 1991.

Rosemarie Murphy
Notary Public

My Commission Expires 4/20/93

ROSEMARIE MURPHY
NOTARY PUBLIC, STATE OF TEXAS
MY COMMISSION EXPIRES
APR. 20, 1993

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County San Juan

Initial X Annual ____ Special ____ Date of Test June 2, 1961

Company Pan American Petroleum Corporation Lease Colleges Canyon Unit Well No. 96

Unit O Sec. 18 Twp. 29N Rge. 12W Purchaser --

Casing 4½ Wt. 9.5 I.D. 4.090 Set at 6186 Perf. 6042 (open ended) To 6069

Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 6041 Perf. ____ To ____

Gas Pay: From 6032 To 6078 L 6041 xG .700(est) GL 4229 Bar.Press. 12

Producing Thru: Casing ____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 5-11-61 Packer None Reservoir Temp. 193° F

OBSERVED DATA

Tested Through (~~Prover~~) (Choke) (~~Meter~~) Type Taps ____

No.	Flow Data (~~Prover~~) (Line) Size	Flow Data (Choke) (~~Meter~~) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI	Shut-In 22 days					2188		2167		
1.	2"	3/4"	537			705	60(est)	1280	60(est)	3 Hr.
2.										
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	12.365		549	1.000	.9258	1.073	6743
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c ____ $(1-e^{-s})$ ____

Specific Gravity Separator Gas ____
Specific Gravity Flowing Fluid ____
P_c 2179 P_c^2 4,748,041

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.						1,669,264	3,078,777		
2.									
3.									
4.									
5.									

Absolute Potential: 9330 MCFPD; n .75

COMPANY Pan American Petroleum Corporation
ADDRESS Box 480, Farmington, New Mexico
AGENT and TITLE R. H. Romer, Jr., Senior Petroleum Engineer
WITNESSED ____
COMPANY ____

REMARKS

RECEIVED
JUN 6 1961
OIL CON. C...
DIST. 3

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w). MCF/da. @ 15.025 psia and 60° F.

P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater. psia

P_w = Static wellhead working pressure as determined at the end of flow period. (Casing if flowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia

P_f = Meter pressure, psia.

h_w = Differential meter pressure, inches water.

F_g = Gravity correction factor.

F_t = Flowing temperature correction factor.

F_{pv} = Supercompressability factor.

n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t.