NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPOI T AND ONE POINT BACK PRESSURE EST FOR GAS WELL

Form C-122
Revised 9-1-65

C/SF C-122

RECEIVED

NOV 05 1981

O. C. D.

ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 3-10-81	
Company: Holly Energy ~~Corp.~~ Inc.		Connection: To Atomsphere			
Pool: North Shugart Morrow		Formation: Morrow			Unit:
Completion Date: 3-1-81	Total Depth: 12,027		Plug Back TD: 11,795	Elevation: 3617.3 GL	Farm or Lease Name: Roche Fed.
Csg. Size: 5½ / Wt.: 17" 20" / d: 4.892" 4.778"	Set At: 12,025	Perforations: From 11,498' To 11,532'			Well No.: 2
Tbg. Size: 2 3/8 / Wt.: 4.7# / d: 1.995"	Set At: 11,445	Perforations: From Open-Ended To			Unit: J / Sec.: 7 / Twp.: 18S / Rge.: 31E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: 11,449		County: EDDY
Producing Thru: TBG	Reservoir Temp. °F: 188 @ 11,462	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2		State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11,445	.6584	.579	.701	-0-			4	Flange

	FLOW DATA					TUBING DATA		CASING DATA		Duration
NO.	Prover Line Size	X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	of Flow
SI						3467		PKR.	choke	24 Hrs.
1.	4"	X 1.75	430	20"	52°	2950	61°		12/64	1 Hr.
2.	4"	X 1.75	430	50"	54°	2635	63°		14/64	45 Min.
3.	4"	X 2.00	450	47"	50°	2330	65°		16/64	45 Min.
4.	4"	X 2.00	480	63"	50°	2072	64°		18/64	1 Hr.
5.										

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	15.01	94.15	443.2	1.008	1.168	1.059	1 762
2.	15.01	148.86	443.2	1.006	1.168	1.059	2 780
3.	19.99	147.55	463.2	1.010	1.168	1.063	3 699
4.	19.99	176.27	493.2	1.010	1.168	1.067	4 435
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	.6615	512	1.29	.891
2.	.6615	514	1.29	.891
3.	.6913	510	1.28	.885
4.	.7361	510	1.28	.879
5.				

Gas Liquid Hydrocarbon Ratio 39.0 Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons 56.45 Deg.

Specific Gravity Separator Gas .6584 XXXXXXXXX

Specific Gravity Flowing Fluid XXXXX .7325

Critical Pressure 672 P.S.I.A. 670 P.S.I.A.

Critical Temperature 375 R 398 R

P_c 3480.2 P_c^2 12,111.79

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		2982.72	8896.59	3215.2
2		2698.07	7279.57	4832.2
3		2436.36	5935.86	6175.9
4		2230.76	4976.27	7135.5
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.6974$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.6974$

Absolute $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 7.528$

Absolute Open Flow 7,530 Mcfd @ 15.025 Angle of Slope θ 45° Slope, n 1,000

Remarks: Plot was 39° 39' Use 45° Thru High Rate
made 11.9 Bbls. Condensate during Test.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	W.S.	M.K.	M.K.