c/ST

Form C-122
Revised 9-1-65

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED BY
OCT 15 1984
O. C. D.
ARTESIA, OFFICE

Type Test: 4 POINT [X] Initial [ ] Annual [ ] Special — Test Date: 9-8-84 — API - 30-015-24737

Company: ~~HOLLY ENERGY~~ Belamath Pet Corp	Connection: TO AIR		
Pool: Cedar Lake Morrow	Formation: MORROW		Unit:
Completion Date: 3-2-84	Total Depth: 11650	Plug Back T.D.: 11563	Elevation: 3535
Farm or Lease Name: NELSON FEDERAL			
Csg. Size: 4.500 / Wt.: 11.6 / d: 4.052 / Set At: 11563	Perforations: From 11475 To 11491		Well No.: #8
Tbg. Size: 2.375 / Wt.: 4.7 / d: 1.995 / Set At: 11423	Perforations: From 0 To 0		Unit: C / Sec.: 3 / Twp.: 18S / Rge.: 30E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE	Packer Set At: 11423		County: EDDY
Producing Thru: TUBING	Reservoir Temp. °F: 196 @ 11483	Mean Annual Temp. °F: 60.0	Baro. Press. – P_a: 13.2 — State: NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11483	11483	0.682	0.51	0.25	0	0	4.0	FLANGE

FLOW DATA / TUBING DATA / B.H.P. DATA

NO.	Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Tubing Press. p.s.i.g.	Tubing Temp. °F	B.H.P. p.s.i.g.	CHOKE	Duration of Flow
SI					2055		3336		72.0
1.	4.03 X 1.500	230	6.0	94	1550		2755	7/64	1.0
2.	4.03 X 1.500	230	10.0	96	1645		2565	10/64	1.0
3	4.03 X 1.500	230	22.0	96	1390		2190	13/64	1.0
4.	4.03 X 1.500	240	34.0	90	940		1766	17/64	1.0
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	10.84	38.20	243.2	.9813	1.2109	1.0273	515.
2	10.84	49.32	243.2	.9671	1.2109	1.0219	640.
3	10.84	73.15	243.2	.9688	1.2109	1.0273	986.
4	10.84	92.78	253.2	.9723	1.2109	1.0284	1253.
5							

NO.	P_t	Temp. °R	T_r	Z
1	0.36	520.	1.36	0.948
2	0.36	520.	1.36	0.948
3	0.36	520.	1.36	0.948
4	0.38	520.	1.36	0.945
5				

Gas Liquid Hydrocarbon Ratio 13.3 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 60.0 Deg.
Specific Gravity Separator Gas 0.682 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX 0.864
Critical Pressure 670. P.S.I.A. 661. P.S.I.A.
Critical Temperature 383. R 440. R

P_c 2079.5 P_c^2 4324.

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	7663.	1684.	2835.	1490.
2	6647.	1564.	2445.	1879.
3	4854.	1347.	1815.	2509.
4	3166.	1118.	1251.	3073.
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.4070$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.4070$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1763.$

Post ID-2
3-1-85
temp + Bk.

Absolute Open Flow 1763. Mcfd @ 15.025 — Angle of Slope θ 45.0 — Slope, n 1.000

Remarks: BOTTOM HOLE PRESSURES MEASURED WITH AMERADA PRESSURE ELEMENTS.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	RICHARD TOWNLEY	BENNETT S. CATHEY	