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C-122

NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
JUL 26 1973
O. C. C.
ARTESIA, OFFICE

Type Test: ☐ Initial ☐ Annual ☒ Special				Test Date: 7-20-73	
Company: BRUNSON - McKNIGHT		Connection: TRANSWESTERN			Unit
Pool: SOUTH CARLSBAD		Formation: MORROW			
Completion Date: 2-20-73	Total Depth: 11,826'	Plug Back TD:		Elevation: 3168.0 GR.	Farm or Lease Name: HOWARD HEMLER
Csg. Size: 5½" / Wt.: 17# / d: 4.892 / Set At: 11,826'		Perforations: From 11,393' To 11,737'			Well No.: 1
Tbg. Size: 2 7/8" / Wt.: 8.7 / d: 2.259 / Set At: 11,246'		Perforations: From OPEN To ENDED			Unit: L / Sec.: 29 / Twp.: 22S / Rge.: 27E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE		Packer Set At: 11,246'			County: EDDY
Producing Thru: TUBING	Reservoir Temp. °F: 200° @ 11,750'	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2		State: NEW MEXICO
L: 11,246' / ri: 11,246'	Gg: .580	% CO_2: 1.00	% N_2: 0.61	% H_2S: .12	Prover: – / Meter Run: 4"X1.375 / Taps: FLANGE

	FLOW DATA				TUBING DATA		CASING DATA		
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	Duration of Flow
SI					1686.0		PACKER		
1.	4" X 1.375	660.0	4.0	85	1534.0	80	CHOKE=	10/64"	1.0 HRS.
2.	4" X 1.375	670.0	18.0	80	1334.0	80	"	14/64"	"
3.	4" X 1.375	685.0	35.0	80	1121.0	80	"	17/64"	"
4.	4" X 1.375	695.0	45.0	84	929.0	81	"	20/64"	"
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	9.071	51.89	673.2	0.9768	1.313	1.047	632
2	9.071	110.90	683.2	0.9813	1.313	1.048	1358
3	9.071	156.32	698.2	0.9813	1.313	1.049	1917
4	9.071	178.52	708.2	0.9777	1.313	1.048	2179
5							

NO.	P_t	Temp. °R	T_r	Z
1	1.01	545	1.56	0.913
2	1.02	540	1.55	0.911
3	1.05	540	1.55	0.909
4	1.06	544	1.56	0.910
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas 0.580 XXXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 668 P.S.I.A. _____ P.S.I.A.
Critical Temperature 349 R _____ R

P_c 2311.2 P_c^2 5341.6

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		2151.2	4627.7	713.9
2		1908.2	3641.2	1700.4
3		1681.2	2826.4	2515.2
4		1508.2	2274.7	3066.9
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.1237$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.9329$

$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3705$

3705 Angle of Slope θ 48.8° Slope n 0.875

Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMERADA GUAGE @ 11,750'

Approved By Commission:	Conducted By: D. TYSON	Calculated By: R. WEST	Checked By: [illegible] W.