NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
OCT 16 1970
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special			Test Date: 9-25-70	
Company: SHENANDOAH OIL CORP.	Connection: NONE			Unit: -
Pool: ~~UNDESIGNATED~~ Haystack Cisco Gas R-4119 4-1-71	Formation: CISCO			
Completion Date: 9-25-70	Total Depth: 6535'	Plug Back TD: 6103'	Elevation: 4181' GL	Farm or Lease Name: FEDERAL 1
Csg. Size: 4 1/2" / Wt.: 9.5 / d: 4.090 / Set At: 6168'	Perforations: From 5846' To 5977'			Well No.: 1
Tbg. Size: 2 3/8" / Wt.: 4.7 / d: 1.995 / Set At: 5706'	Perforations: From OPEN To ENDED			Unit: K / Sec.: 21 / Twp.: 6S / Rge.: 27E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE		Packer Set At: 5706'		County: CHAVES
Producing Thru: TUBING	Reservoir Temp. °F: 136 @ 5700'	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
5912'	-	0.727	0.00	4.08	0.00	-	X	F

NO.	FLOW DATA: Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							1975 DW		SHP		62.0 HRS
1.	3	21/64	2	990	43	74	1777	67	-	-	1.5
2.	3	22/64	2	870	37	73	1825	67	-	-	1.0
3.	3	20/64	2	720	32	72	1868	68	-	-	1.0
4.	3	18/64	2	570	27	74	1903	68	-	-	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	21.32	207.66	1003.2	0.9868	1.173	1.115	5716.5
2.	21.32	180.77	883.2	0.9877	1.173	1.101	4916.1
3	21.32	153.18	733.2	0.9887	1.173	1.083	4101.9
4.	21.32	125.48	583.2	0.9868	1.173	1.065	3297.9
5.							

NO.	P_t	Temp. °R	T_r	Z
1	1.52	532	1.38	0.805
2.	1.31	533	1.38	0.825
3.	1.11	532	1.38	0.853
4.	0.88	531	1.38	0.882
5.				

Gas Liquid Hydrocarbon Ratio 130,655 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 61.4 Deg.
Specific Gravity Separator Gas 0.727 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 661 P.S.I.A. - P.S.I.A.
Critical Temperature 387 R - R

P_c 2386.2 P_c^2 5694.0

NO	P_t^2	P_w *	P_w^2	$P_c^2 - P_w^2$
1	-	2318.2	5466.3	228.1
2	-	2351.2	5537.1	156.1
3	-	2371.2	5575.3	118.7
4	-	2389.2	5613.1	80.9
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 27.362$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 7.020$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 40116$

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U. S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

Absolute Open Flow 40000 Mcfd @ 15.025 Angle of Slope θ 59° 23' Slope, n 0.750

Remarks: * SHP = (-1731') 5912' USED FOR PRESSURE CALCULATIONS

Joe A. Coleman

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
not RLS 1-5-72	COLEMAN ENGINEERING	JOE A. COLEMAN	JOE A. COLEMAN