NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPOIN AND ONE POINT BACK PRESSURE ST FOR GAS WELL

Form C-122
Revised 10-1-78

SF/file
c-122 file

RECEIVED
MAR 24 1982
O. C. D.
ARTESIA, OFFICE

Type Test: ☒ Initial FOUR POINT ☐ Annual ☐ Special			Test Date: 3-17-82	1980 FSL
Company: MC CLELLAN OIL ~~COMPANY~~ Co-p	Connection: AIR NEW WELL			1980 FWL
Pool: UNDESIGNATED	Formation: ABO			Unit: K
Completion Date: 3-17-82	Total Depth: 3,875	Plug Back TD: 3,822	Elevation: 3,786 KB	Farm or Lease Name: COYOTE DRAW FEDERAL
Csg. Size: 4.50 / Wt.: 10.5 / d: 4.052 / Set At: 3875		Perforations: From 3522 To 3694		Well No.: 3
Tbg. Size: 2.375 / Wt.: 4.7 / d: 1.995 / Set At: 3490		Perforations: From OPEN To ENDED		Unit: K / Sec.: 30 / Twp.: 7 / Rge.: 25E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE		Packer Set At: NONE		County: CHAVES
Producing Thru: TUBING	Reservoir Temp. °F: 98 @ 3,608'	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
3,608	3,608	0.6822	3.517	9.289		2"		

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	B.H.P. DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					946	79	1054		
1	2" X .218	905		72	906	76	1012		1
2.	2" X .312	765		73	836	75	948		1
3	2" X .375	660		73	763	66	882		1
4	2" X .437	550		71	694	65	809		1
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	.8608	.00	918.2	.9887	1.2109	1.0703	1013.
2	1.7140	.00	778.2	.9877	1.2109	1.0588	1689.
3	2.4390	.00	673.2	.9877	1.2109	1.0506	2063.
4	3.4950	.00	503.2	.9896	1.2109	1.0431	2460.
5							

NO	P_t	Temp. °R	T_r	Z
1	1.37	532.	1.51	.873
2	1.16	533.	1.52	.892
3	1.01	533.	1.52	.906
4	.84	531.	1.51	.919
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.

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

Specific Gravity Separator Gas .6820 XXXXXXXXX

Specific Gravity Flowing Fluid XXXXX

Critical Pressure 669 P.S.I.A. _____ P.S.I.A.

Critical Temperature 351 R _____ R

P_c 1067.2 P_c^2 1138.9

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1		1025.2	1051.0	88.0
2		961.2	923.9	215.0
3		895.2	801.4	338.0
4		822.2	676.0	463.0
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.4599$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.6151$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3973.2$

Paste & ID-2 comp book SI 4-2-82

Calculated Open Flow 3973 Mcfd @ 15.025 Angle of Slope θ 62.0 Slope, n .5326

Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMARADA PRESSURE ELEMENT.

Approved By Commission: | Conducted By: | Calculated By: | Checked By:

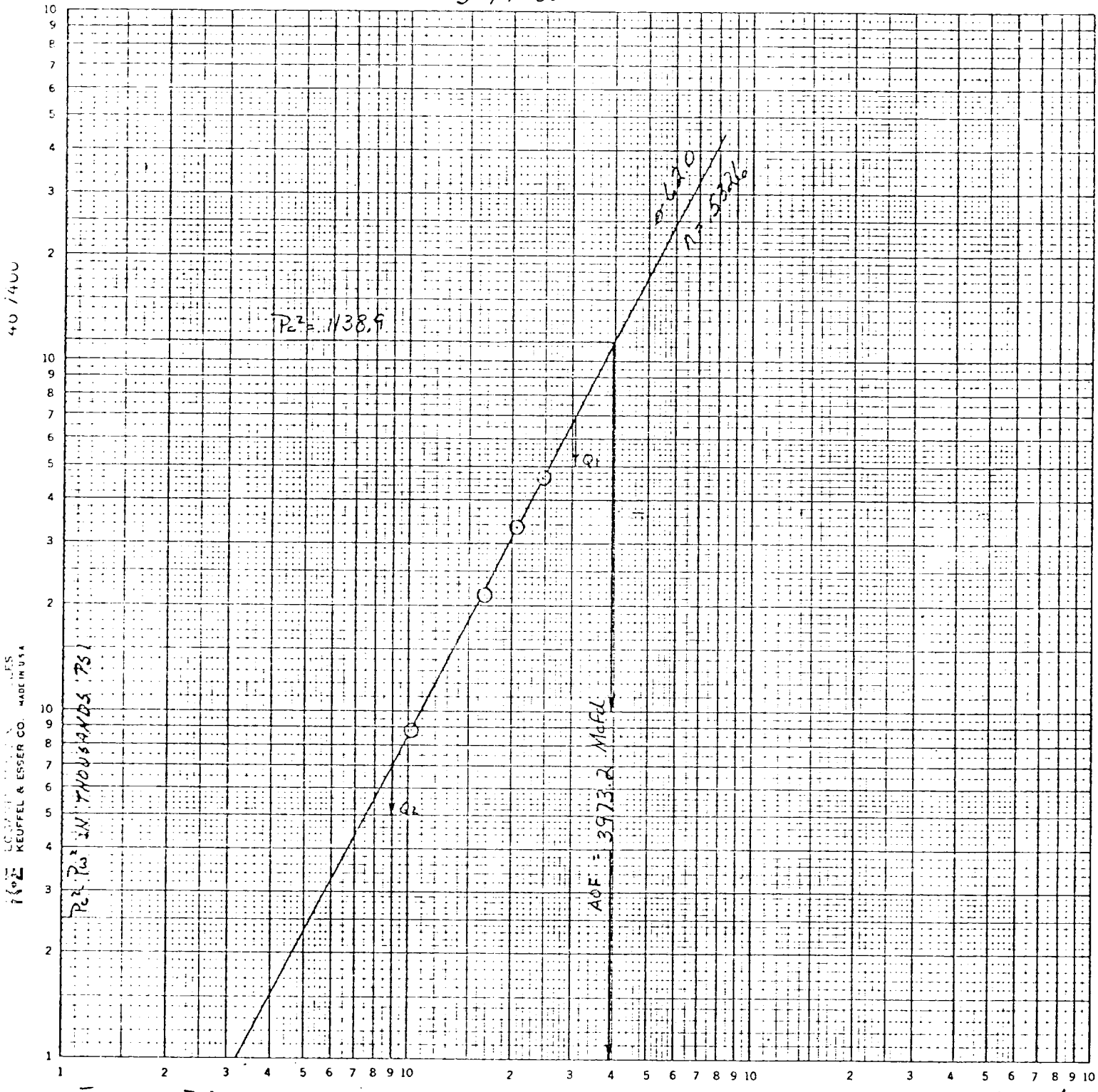
McCLELLAN OIL

COYOTE DRAW FEDERAL #3

UNIT K SEC 30 TWP 7 RGE 25E

CHAVES COUNTY

3-17-82



ΔP_1^2 $P_c^2 - P_w^2 = 700$

ΔP_2^2 $P_c^2 - P_w^2 = 70$

$Q_1 = 3067.9$

$Q_2 = 2.954.24$

LOG $Q_1 = 3.48684$

LOG $Q_2 = 2.95424$

$n = .5326$

BENNETT - CATHEY
Artesia, New Mexico 88210

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY MC CLELLAN OIL COMPANY WELL NAME COYOTE DRAW FEDERAL WELL NO. 3
DATE OF TEST 3-17-82 FORMATION PAGE 1 OF 1
4 PT. BACK PRESSURE TEST

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3 #7201B RANGE 3,200 LBS.
CLOCK NUMBER B3443 RANGE 12 HOURS
TIME WELL SHUT IN 2022 HOURS 3-17-82
TIME CLOCK STARTED 1421 HOURS
DEAD WEIGHT ELEMENT ON SURFACE 959 PSIA SHUT IN LBS.
TIME ELEMENT REACHED BOTTOM 1452 HOURS
DEAD WEIGHT ELEMENT ON BOTTOM 959 PSIA SHUT IN LBS.
ELEMENT SET AT 3,608 FEET.
TEMPERATURE 3,608 FT. 98 °F.
DEAD WEIGHT AT THE END OF 101 HOURS 15 MINUTES.

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
3-17-82	SIP	1452		1054	13.2		1067
START TEST	0	1515		1054	13.2		1067
	1/4	1530		1044	13.2		1057
	1/2	1545		1029	13.2		1042
	3/4	1600		1018	13.2		1031
END RATE 1	1	1615		1012	13.2		1025
	1-1/4	1630		1002	13.2		1015
	1-1/2	1645		977	13.2		990
	1-3/4	1700		961	13.2		974
END RATE 2	2	1715		948	13.2		961
	2-1/4	1730		928	13.2		941
	2-1/2	1745		908	13.2		921
	2-3/4	1800		894	13.2		907
END RATE 3	3	1815		882	13.2		895
	3-1/4	1830		864	13.2		877
	3-1/2	1845		844	13.2		857
	3-3/4	1900		827	13.2		840
END RATE 4	4	1915		809	13.2		822

BENNETT - CATHEY
Artesia, New Mexico 88210

SUBSURFACE PRESSURE MEASUREMENTS

PAUL RAGSDALE

COMPANY MC CLELLAN OIL COMPANY WELL NAME COYOTE DRAW FEDERAL WELL NO. 3
DATE OF TEST 3-17-82 TO 3-20-82 FORMATION ABO
BUILD-UP TEST

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3# 7201 RANGE 0-3,200 LBS.
CLOCK NUMBER G 2522 RANGE 72 HOUR
TIME WELL SHUT IN 2022 HOURS FLOWING FOUR POINT TEST
TIME CLOCK STARTED 1955 HOURS
DEAD WEIGHT ELEMENT ON SURFACE 815 FLOWING LBS.
TIME ELEMENT REACHED BOTTOM 2014 HOURS
DEAD WEIGHT ELEMENT ON BOTTOM 708 FLOWING LBS.
ELEMENT SET AT 3,608 FEET.
TEMPERATURE 3,608 FT. 98° °F.
'5 PSIA DEAD WEIGHT AT THE END OF 72 HOURS 41 MINUTES.

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
3-17-82	0	2022		863	13.2		876
	1/4	2037		925	13.2		938
	1/2	2052		941	13.2		954
	3/4	2107		953	13.2		966
	1	2122		961	13.2		974
	1 1/4	2137		966	13.2		979
	1 1/2	2152		973	13.2		986
	1 3/4	2207		978	13.2		991
	2	2222		980	13.2		993
	2 1/4	2237		984	13.2		997
	2 1/2	2252		987	13.2		1000
	2 3/4	2307		990	13.2		1003
	3	2322		993	13.2		1006
	3 1/4	2337		995	13.2		1008
	3 1/2	2352		996	13.2		1009
3-18-82	3 3/4	2407		998	13.2		1011
	4	2422		1000	13.2		1013
	4 1/4	2437		1002	13.2		1015
	4 1/2	2452		1003	13.2		1016
	4 3/4	0107		1004	13.2		1017
	5	0122		1005	13.2		1018
	6	0222		1009	13.2		1022
	7	0322		1012	13.2		1025
	8	0422		1016	13.2		1029
	9	0522		1019	13.2		1032
	10	0622		1022	13.2		1035
	11	0722		1025	13.2		1038
	12	0822		1027	13.2		1040
	13	0922		1029	13.2		1042
	14	1022		1030	13.2		1043
	15	1122		1032	13.2		1045
	16	1222		1033	13.2		1046
	18	1422		1035	13.2		1048
	20	1622		1037	13.2		1050
	25	2122		1042	13.2		1055
3-19-82	30	0222		1045	13.2		1058
	35	0722		1049	13.2		1062
	40	1222		1052	13.2		1065

BENNETT WIRE LINE SERVICE
Artesia, New Mexico 88210

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY MC CLELLAN OIL COMPANY WELL NAME COYOTE DRAW FEDERA WELL NO. 3
DATE OF TEST 3-17-82 TO 3-20-82 LOCATION ABO

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psig	PRESSURE AT MID-POINT OF PERFORATIONS psig
	40	1222		1052	13.2		1065
	45	1722		1053	13.2		1066
	50	2222		1056	13.2		1069
3-20-82	55	0322		1057	13.2		1070
	60	0822		1058	13.2		1071
	65	1322		1058	13.2		1073
	68 1/4	1637		1061	13.2		1074

NEW-TEX LAB
P.O.BOX 1161
HOBBS NM 88241-1161
505-393-3561

ANALYSIS NUMBER: 6946
DATE OF RUN: 3/18/82
DATE SECURED: 3/17/82

ANALYSIS CERTIFICATE

SAMPLE IDENT: CYOTE DRAW FEDERAL #3

CLIENT: BENNETT-CATHEY INC.
ADDRESS: BOX 787
CITY, STATE: ARTESIA NM 88210

SAMPLING PRESS: 0 PSIG SAMPLING TEMP: 0 DEG F
STATION NUMBER:

********** GAS ANALYSIS **********

	MOLE PERCENT	GAL/ MCF
NITROGEN	9.2890517	
CARBON DIOXIDE	3.5171251	
METHANE	80.6554489	
ETHANE	3.6581807	0.9756370
PROPANE	1.6037266	0.4402230
ISO-BUTANE	0.2398377	0.0782590
NORMAL BUTANE	0.4746833	0.1492400
ISO-PENTANE	0.1481502	0.0540897
NORMAL PENTANE	0.1648331	0.0595707
HEXANES	0.1177337	0.0482944
HEPTANES PLUS	0.1312289	0.0603915
TOTAL	100.0000000	1.8657100

PROPANE GPM: 0.44 BUTANES GPM: 0.23
ETHANE GPM: 0.98 PENTANES PLUS GPM: 0.22

SPECIFIC GRAV (CALC): .6822
MOLE WEIGHT: 19.77

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
	14.696	952	969
	14.650	949	966
	14.730	954	971
	14.735	954	971

ANALYZED BY:

APPROVED BY: