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appropriate district office.
See Rule 401 & Rule 1122

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-122
Revised October, 1999

CONFIDENTIAL

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator CONCHO Resources Inc.				Lease or Unit Name SOUTHERN CROSS "15" FED			
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 3/14/01	Well No. 1
Completion Date 2/28/01		Total Depth 8630		Plug Back TD 8576		Elevation 3698'	Unit Ltr - Sec - TWP - Rge 15 18S 24E
Csg. Size 5-1/2"	Wt. 17	d 2.441	Set At 8640	Perforations: From: 7968 To: 8013		County EDDY	
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 7968	Perforations: From: To:		Pool Strawn	
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 7958		Formation	
Producing Thru TUBING		Reservoir Temp. °F 153.5	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2		Connection SALES	
L 7950	H 7950	Gg 0.613	%CO ₂ 0.315	%N ₂ 1.003	%H ₂ S N/A	Prover N/A	Meter Run 2.067
						Taps FLG	

FLOW DATA				TUBING DATA				CASING DATA				Duration of Flow
No.	Prover Line Size	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			
SI						1770	N/A	PKR	N/A			
1	2.067 X 1.125		285	2.9	72	1660				1 HR.		
2	2.067 X 1.125		290	9.9	83	1500				1 HR.		
3	2.067 X 1.125		294	24.1	88	1155				1 HR.		
4	2.067 X 1.125		296	33.2	83	810				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 F _g	Super Compress Factor F _{pv}	Rate of Flow Q. Mcfd
1							234
2	GAS	VOLUMES	FROM	TOTAL	FLOW	METER	431
3							701
4							831
5							

No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	N/A	Mcf bbl.
1					A.P. I. Gravity of Liquid Hydrocarbons	N/A	Deg.
2	TOTAL	FLOW	METER		Specific Gravity Separator Gas	0.613	XXXXXXX
3					Specific Gravity Flowing Fluid	N/A	XXXXXX
4					Critical Pressure	671	P.S.I.A.
5					Critical Temperature	361	R.

P _c 1788.1		P _{c2} 3197.3	
No.	P _t ²	P _w	P _w ²
1	2799.6	1673.3	2800
2	2289.8	1513.7	2291.3
3	1364.7	1170	1368.9
4	677.7	826.9	683.8
5			

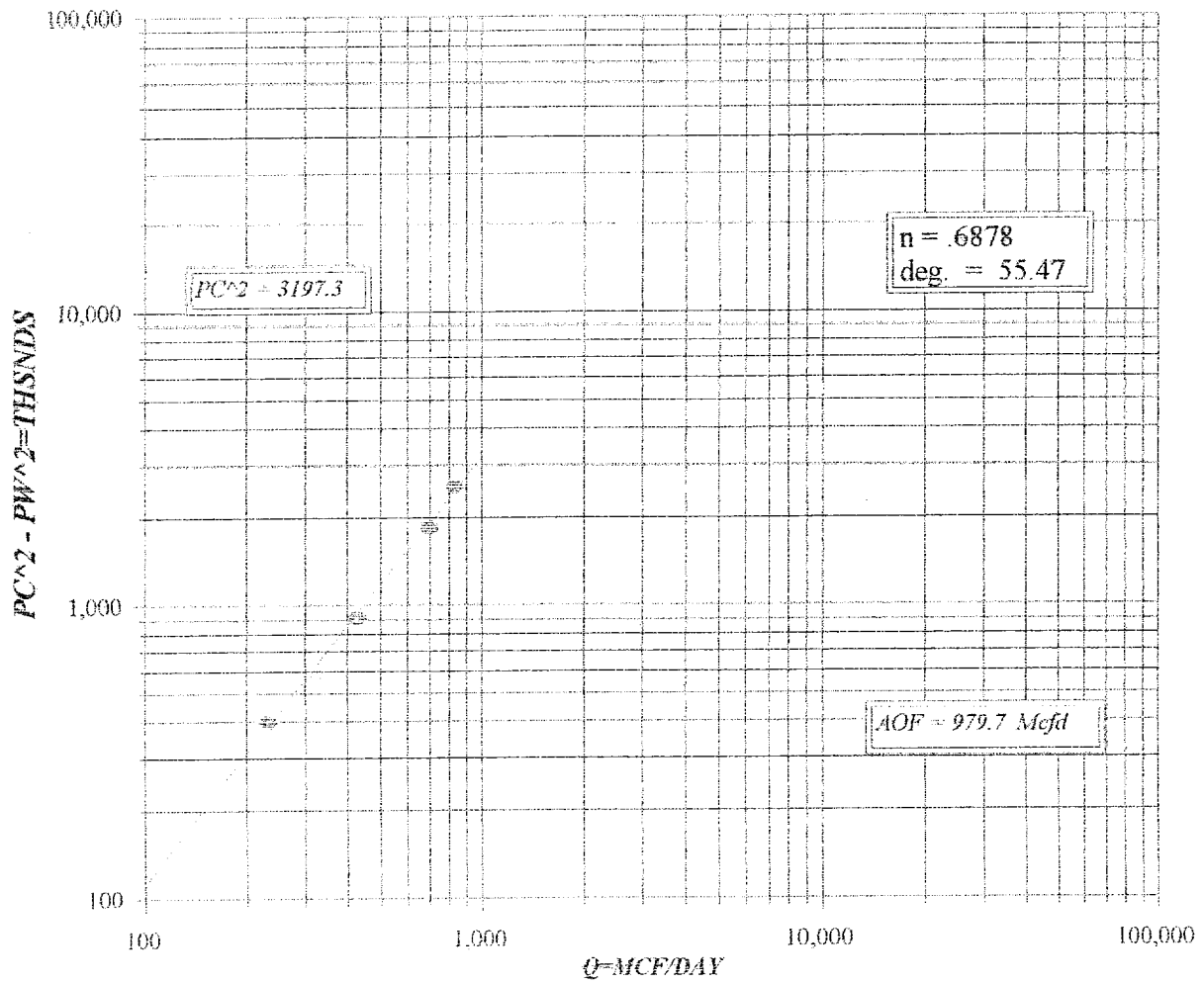
(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.272$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.179$	
AOF = Q		$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 979.7$	

Absolute Open Flow	979.8	Mcf @ 15.025	Angle of Slope (°):	55.47	Slope n:	0.6878
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Remarks: * CALCULATED FROM KNOWN SHUT IN BOTTOM HOLE PRESSURE. NO LIQUID MADE DURING TEST.			
Approved By Division:	Conducted By: PRO WELL TESTING	Calculated By: MERV BUECKER	Checked By: BM

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CONCHO RES.
SOUTHERN CROSS "15" FED #1



COMPANY : LUMBER ASS
 UNIT :
 L : 7950 H : 7950 L : 1 G/CHIX : 0.613
 %C2 : 0.315 %W2 : 1.003 H2S : DATE : 3/14/01
 d : 2.441 Pr : 0.010763 GH : 4873.4 RANGE :

VOL 1 : 234 PSIA 1 : 1673.2 RESV.TEMP 153.5
 VOL 2 : 431 PSIA 2 : 1513.2
 VOL 3 : 701 PSIA 3 : 1168.2 SHUT-IN PR= 1788.1
 VOL 4 : 831 PSIA 4 : 823.2

PCR : 671
 TCR : 361

LINE	RATE 1		RATE 2		RATE 3		RATE 4	
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND
1 QM	0.234	0.234	0.431	0.431	0.701	0.701	0.831	0.831
2 TW	534	534	534	534	534	534	534	534
3 Ts	613.5	613.5	613.5	613.5	613.5	613.5	613.5	613.5
4 T	573.8	573.8	573.8	573.8	573.8	573.8	573.8	573.8
PR (est)	2.49		2.26		1.74		1.23	
5 Z(est)	0.815	0.807	0.824	0.815	0.850	0.840	0.883	0.874
6 TZ	467.8	463.2	473.0	467.7	487.8	482.1	506.3	501.5
7 GH/TZ	10.418	10.521	10.302	10.419	9.991	10.109	9.625	9.717
8 eS	1.478	1.484	1.472	1.478	1.455	1.461	1.435	1.440
9 l-e-S	0.323	0.326	0.320	0.323	0.312	0.316	0.303	0.305
10 Pt	1673.2	1673.2	1513.2	1513.2	1168.2	1168.2	823.2	823.2
11 Pt2 /1000	2799.6	2799.6	2289.8	2289.8	1364.7	1364.7	677.7	677.7
12 Fr	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763
13 Pc=PrTZ	5.035	4.985	5.091	5.034	5.250	5.189	5.450	5.398
14 PcQm	1.18	1.17	2.19	2.17	3.68	3.64	4.53	4.49
15 L/H(PcQm)	1.4	1.4	4.8	4.7	13.5	13.2	20.5	20.1
16 Pw	0.448884	0.443670	1.543854	1.522676	4.232151	4.174203	6.213789	6.1450012
17 Pw2	2800.0	2800.0	2291.3	2291.3	1368.9	1368.9	683.9	683.8
18 Ps2	4138.4	4154.5	3371.9	3386.6	1991.1	1999.8	981.1	984.4
19 Ps	2034.3	2038.3	1836.3	1840.3	1411.1	1414.2	990.5	992.2
20 P	1853.8	1855.7	1674.7	1676.7	1289.6	1291.2	906.9	907.7
21 Pr	2.76	2.77	2.50	2.50	1.92	1.92	1.35	1.35
22 Tr	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59
23 Z	0.807	0.807	0.815	0.815	0.840	0.840	0.874	0.874

PC - 1700.1 PC2 - 3137.3
 Pt2 = 2289.8 Pw = 1673.3
 1364.7 1513.7
 677.7 1170.0
 826.9
 Pc2-Pw2= 397.3 Pw2 = 2800.0
 906.0 2291.3
 1828.4 1368.9
 2513.5 683.8
 R = 0.688
 Pc2/(Pc2-Pw2) = 8.048
 3.529
 1.749
 1.272
 [Pc2/Pc2-Pw2]n = 4.197
 2.381
 1.469
 1.180
 AOF= Q 0.982
 1.026
 1.030
 0.980
 FORM C122-D

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WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURE (Pc or Pw)
FROM KNOWN BOTTOM HOLE PRESSURE (Pf or Ps)

FORM C-122F

COMPANY CONCHO RES

LEASE : SOUTHERN CWELL NO. : 1

DATE :

UNIT

SECTION :

TOWNSHIP :

RANGE :

L

7950

H : 7950

L/H :

1

G/C MIX : 0.6130

CO2 : 0.315

N2 : 1.003

H2S :

GH : 4873.4

PCR : 671

TCR : 361

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LINE		1	2	3	4	5	6	7	8
1	TW(W.H. R)	534	534	534	534	534	534	534	534
2	Ts(B.H. R)	613.5	613.5	613.5	613.5	613.5	613.5	613.5	613.5
3	T=(Tw+Ts/2)	573.8	573.8	573.8	573.8	573.8	573.8	573.8	573.8
4	Z (EST.)	0.858	0.803	ERR	ERR	ERR	ERR	ERR	ERR
5	TZ	492	461	ERR	ERR	ERR	ERR	ERR	ERR
6	GH/TZ	9.903	10.581	ERR	ERR	ERR	ERR	ERR	ERR
7	eS(TABLE XIV)	1.450	1.487	ERR	ERR	ERR	ERR	ERR	ERR
8	Pf or Ps	2180.5	2180.5	0	0	0	0	0	0
9	Pf2 or Ps2	4754.6	4754.6	0.0	0.0	0.0	0.0	0.0	0.0
10	Pc2=Pf/eS or Pw2=Ps2/eS	3279.7	3197.4	ERR	ERR	ERR	ERR	ERR	ERR
11	Pc or Pw	1811	1788	ERR	ERR	ERR	ERR	ERR	ERR
12	P=(Pw+Ps/2)or(Pc+Pf/2)	1996	1984	ERR	ERR	ERR	ERR	ERR	ERR
13	Pr=(P/Pcr)	2.97	2.96	ERR	ERR	ERR	ERR	ERR	ERR
14	Tr(T/Tcr)	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59
15	Z (TABLE XI)	0.803	0.803	ERR	ERR	ERR	ERR	ERR	ERR

PC PW 1 : 1788.1 PW 2 : ERR PW 3 : ERR PW 4



Laboratory Services, Inc.

4016 Fleeta Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Pro Well Testing & Wireline
P. O. Box 791
Hobbs, New Mexico 88241

SAMPLE: Southern Cross "13"
IDENTIFICATION: Fed. Com. #1
COMPANY: Concho Resources
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 3/14/01 12:30 pm
ANALYSIS DATE: 3/15/01
PRESSURE - PSIG 298
SAMPLE TEMP. °F 84
ATMOS. TEMP. °F

GAS (XX) LIQUID ()
SAMPLED BY: Pro Well
ANALYSIS BY: Vickie Biggs

REMARKS: Sample taken @ the meter run.

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	1.003	
Carbon Dioxide (CO2)	0.315	
Methane (C1)	92.189	
Ethane (C2)	4.277	1.141
Propane (C3)	1.224	0.336
I-Butane (IC4)	0.214	0.070
N-Butane (NC4)	0.239	0.075
I-Pentane (IC5)	0.097	0.085
N-Pentane (NC5)	0.068	0.025
Hexane Plus (C6+)	0.374	0.162
	100.000	1.844

BTU/CU.FT. - DRY 1077
AT 14.650 DRY 1078
AT 14.650 WET 1055
AT 14.73 DRY 1079
AT 14.73 WET 1061

MOLECULAR WT. 17.7608

SPECIFIC GRAVITY -
CALCULATED 0.618
MEASURED

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