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See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator OXY USA						Lease or Unit Name COLONIA 'A'					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 6-3-94		Well No. 1			
Completion Date 5-26-94		Total Depth 11790		Plug Back TD 11320		Elevation 3143' GR		Unit Ltr. - Sec. - TWP - Rge. 18-22S-27E			
Csg. Size 5 1/2	Wt. 17#	d 4.778	Set At 11790	Perforations: From: 10688 To: 10704		County EDDY					
Tbg. Size 2 7/8	Wt. 6.4	d 2.441	Set At	Perforations: From: To:		Pool Carlsbad Steam					
Type Well - Single - Bradenhead - G.G. or L.O. Multiple single						Packer Set At 10628		Formation STRAWN			
Producing Thru tbg.		Reservoir Temp. °F 175		Mean Annual Temp. °F 60°		Baro. Press - P. 13.2		Connection PIPELINE			
L *10638	H 10638	Gg .614	% CO ₂ .48	% N ₂ .85	% H ₂ S	Prover -0-	Meter Run 4.026	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						1775		PKR		
1.	4.026 X	1.875	160	10	59°	1600		"		1 hr.
2.	4.026 X	1.875	160	10	60°	1560		"		1 hr.
3.	4.026 X	1.875	165	10	62°	1545		"		1 hr.
4.	4.026 X	1.875	185	47	60°	1250		"		1 hr.
5.	4.026 X	1.875	185	65	62°	1115		"		1 hr.

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.	17.26	41.62	173.2	1.001	1.276	1.017	933
2.	17.26	41.62	173.2	1.000	1.276	1.017	932
3.	17.26	42.21	178.2	.9981	1.276	1.017	944
4.	17.26	96.52	198.2	1.000	1.276	1.020	2168
5.	17.26	113.50	198.2	.9981	1.276	1.020	2545

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	DRY GAS	Mcf/bbl.
1.	.26	519	1.43	.967	A.P. I. Gravity of Liquid Hydrocarbons DRY Deg.		
2.	.26	520	1.44	.967	Specific Gravity Separator Gas .614	XXXXXXXXXX	
3.	.27	522	1.44	.966	Specific Gravity Flowing Fluid DRY	XXXXXX	
4.	.30	520	1.44	.962	Critical Pressure 671 P.S.I.A.	P.S.I.A.	
5.	.30	522	1.44	.962	Critical Temperature 362 R	R	

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1.		1568.2	2459.3	704.1
2.				
3.		1546.1	2390.4	773.0
4.		1238.8	1534.6	1628.80
5.		1113.5	1239.9	1923.50

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.64461$

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.64461$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4,185.5$

Absolute Open Flow 4,185.5 Mcfd @ 15.025	Angle of Slope θ 45°	Slope, n 1.0000
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Remarks: *** BHP INFORMATION OBTAINED @ THIS DEPTH**

NO FLUID MADE DURING TEST

Approved By Division	Conducted By: PRO WELL TESTERS GB	Calculated By: KS	Checked By: BM
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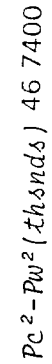
OXY U.S.A.

Colonia 'A', Well # 1

18-22S-27E

Eddy County, New Mexico

6-3-94



LOGARITHMIC 3 X 3 CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

Q MCF/DAY

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

FORM C-122F

COMPANY OXY U.S.A.

UNIT

L

10638

LEASE : COLONIA A WELL NO. : 1
SECTION : 18 TOWNSHIP : 22
H : 10638 L/H : 1
CO2 : 0.48 N2 : 0.85
GH : 6531.7 PCR : 671

DATE 06-03-94

RANGE : 27

G/GMIX : 0.6140

H2S :

TCR : 362

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)	640.4	640.4	640.4	640.4	640.4	640.4	640.4	640.4
3	T=(Tw+Ts/2)	587.2	587.2	587.2	587.2	587.2	587.2	587.2	587.2
4	Z (EST.)	0.872	0.815	ERR	ERR	ERR	ERR	ERR	ERR
5	TZ	512	479	ERR	ERR	ERR	ERR	ERR	ERR
6	GH/TZ	12.757	13.643	ERR	ERR	ERR	ERR	ERR	ERR
7	eS(TABLE XIV)	1.613	1.668	ERR	ERR	ERR	ERR	ERR	ERR
8	Pf or Ps	2297.1	2297.1	0	0	0	0	0	0
9	Pf2 or Ps2	5276.7	5276.7	0.0	0.0	0.0	0.0	0.0	0.0
10	Pc2=Pf/eS or Pw2=Ps2/eS	3270.3	3163.5	ERR	ERR	ERR	ERR	ERR	ERR
11	Pc or Pw	1808	1779	ERR	ERR	ERR	ERR	ERR	ERR
12	P=(Pw+Ps/2) or (Pc+Pf/2)	2053	2038	ERR	ERR	ERR	ERR	ERR	ERR
13	Pr=(P/Pcr)	3.06	3.04	ERR	ERR	ERR	ERR	ERR	ERR
14	Tr(T/Tcr)	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62
15	Z (TABLE XI)	0.815	0.816	ERR	ERR	ERR	ERR	ERR	ERR

~~PW~~ 1 : 1778.6 PW 2 : ERR PW 3 : ERR PW 4 : ERR

Pc

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

FORM C-122F

COMPANY OXY U.S.A.

UNIT

L

10638

LEASE : COLONIA A WELL NO. :

1

DATE 06-03-94

SECTION : 18

TWNSHP : 22

RANGE : 27

H : 10638

L/H : 1

G/GMIX : 0.6140

CO2 : 0.48

N2 : 0.85

H2S :

GH : 6531.7

PCR : 671

TCR : 362

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)	640.4	640.4	640.4	640.4	640.4	640.4	640.4	640.4
3	T=(Tw+Ts/2)	587.2	587.2	587.2	587.2	587.2	587.2	587.2	587.2
4	Z (EST.)	0.876	0.822	0.817	0.824	0.832	0.843	0.842	0.852
5	TZ	514	483	480	484	489	495	494	501
6	GH/TZ	12.701	13.526	13.620	13.500	13.365	13.203	13.214	13.050
7	eS(TABLE XIV)	1.610	1.661	1.667	1.659	1.651	1.641	1.641	1.631
8	Pf or Ps	2020.9	2020.9	1991.4	1991.4	1586.7	1586.7	1422.2	1422.2
9	Pf2 or Ps2	4084.0	4084.0	3965.7	3965.7	2517.6	2517.6	2022.7	2022.7
10	Pc2=Pf/eS or Pw2=Ps2/eS	2536.5	2459.3	2379.6	2390.3	1525.2	1534.5	1232.3	1239.9
11	Pc or Pw	1593	1568	1543	1546	1235	1239	1110	1114
12	P=(Pw+Ps/2) or (Pc+Pf/2)	1807	1795	1767	1769	1411	1413	1266	1268
13	Pr=(P/Pcr)	2.69	2.67	2.63	2.64	2.10	2.11	1.89	1.89
14	Tr(T/Tcr)	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62
15	Z (TABLE XI)	0.822	0.823	0.824	0.824	0.843	0.842	0.852	0.852

Rate 1 Rate 3 Rate 4 Rate 5
PW 1 : 1568.2 PW 2 : 1546.1 PW 3 : 1238.8 PW 4 : 1113.5

Laboratory Services, Inc.
 1331 Tasker Drive
 Hobbs, New Mexico 88240

Telephone: (505) 397-3713

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

 SAMPLE
 IDENTIFICATION: Colombia "A" #1
 COMPANY: OXY USA
 LEASE:
 PLANT:

SAMPLE DATA:	DATE SAMPLED:	6/3/94 5:00PM	GAS (XX)	LIQUID ()
	ANALYSIS DATE:	06-04-94	SAMPLED BY:	Glen Burton-Pro Well
	PRESSURE - PSIG	180.00	ANALYSIS BY:	Rolland Perry
	SAMPLE TEMP. °F	62.00		
	ATMOS. TEMP. °F	93.00		

REMARKS:

COMPONENT ANALYSIS

COMPONENT		MOL PERCENT	GPM	
Hydrogen Sulfide	(H2S)			
Nitrogen	(N2)	0.85		
Carbon Dioxide	(CO2)	0.48		
Methane	(C1)	91.99		
Ethane	(C2)	4.53	1.208	
Propane	(C3)	1.16	0.319	
I-Butane	(IC4)	0.19	0.062	
N-Butane	(NC4)	0.25	0.079	
I-Pentane	(IC5)	0.10	0.037	
N-Pentane	(NC5)	0.07	0.025	
Hexane Plus	(C6)	0.38	0.156	
		100.00	1.886	
BTU/CU.FT. - DRY		1078	MOLECULAR WT.	17.7832
AT 14.650 DRY		1074		
AT 14.650 WET		1056		
AT 14.73 DRY		1080		
AT 14.73 WET		1061		
SPECIFIC GRAVITY -				
CALCULATED		0.614		
MEASURED				