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LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

RECEIVED

Form C-105
Revised 11-1-74

5a. Indicate Type of Lease
State ☐ Fee ☒

5. State Oil & Gas Lease No.

7. Unit Agreement Name

8. Farm or Lease Name

Polk "A" Com.

9. Well No.

1

13. Field and Pool, or Wildcat

Unders. - Strawn

12. County

Eddy

10. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

DRY ☐

OTHER

O. C. C.

ARTESIA, OFFICE

b. TYPE OF COMPLETION

NEW WELL ☒

WORK OVER ☐

DEEPEN ☐

PLUG BACK ☐

DIFF. RESVR. ☐

OTHER

2. Name of Operator

Cities Service Company

3. Address of Operator

P.O. Box 1919 Midland, TX 79702

4. Location of Well

UNIT LETTER B LOCATED 660 FEET FROM THE North LINE AND 2310 FEET FROM

THE East LINE OF SEC. 17 TWP. 23S RGE. 28E

15. Date Spudded

12-15-77

16. Date T.D. Reached

3-29-78

17. Date Compl. (Ready to Prod.)

6-27-78

18. Elevations (DF, KKB, RT, GR, etc.)

3025.5' GR

19. Elev. Casinghead

3025.5' GR

20. Total Depth

12,574'

21. Plug Back T.D.

12,171'

22. If Multiple Compl., How Many

2

23. Intervals Drilled By

Rotary Tools

0-12,574

Cable Tools

24. Producing Interval(s), of this completion - Top, Bottom, Name

11,152' - 11,158' - Strawn

25. Was Directional Survey Made

No

26. Type Electric and Other Logs Run

FDC/CNL - GR - CAL - DLL - MSFL

27. Was Well Cored

No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8" OD	48	400'	17-1/2"	400 sacks	None
9-5/8" OD	36 & 40	5550'	12-1/4"	3050 sacks	None
7" OD	23 & 26	1100'	8-3/4"	800 sacks	None

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
5" OD	10,652	12,574	150		2-3/8"	10,545'	10,563'

30. TUBING RECORD

31. Perforation Record (Interval, size and number)

2- 0.32 holes each at 11,152', 11,153', 11,154', 11,156', 11,157', and 11, 158'

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL 11,152-11,158' AMOUNT AND KIND MATERIAL USED 100 gals 10% Acetic acid

33. PRODUCTION

Date First Production	6-27-78	Production Method (Flowing, gas lift, pumping - Size and type pump)	Flowing	Well Status (Prod. or Shut-in)	Shut-in
Date of Test	6-27-78	Hours Tested	6-1/2	Choke Size	28/64"
Flow Tubing Press.	1600#	Casing Pressure		Prodn. For Test Period	
		Calculated 24-Hour Rate		Oil - Bbl.	None
				Gas - MCF	3.162
				Water - Bbl.	None
				Gas - Oil Ratio	

34. Disposition of Gas (Sold, used for fuel, vented, etc.)

Vented

Test Witnessed By

35. List of Attachments

Deviation Survey

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED

E. J. J. J.

TITLE Region Operations Manager

DATE July 12, 1978

*Post 1600
7-21-78
Comp. Strawn*

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

Northwestern New Mexico

T. Anhy _____	T. Canyon _____	10,315	T. Ojo Alamo _____	T. Penn. "B" _____
T. Salt _____	T. Strawn _____	10,784	T. Kirtland-Fruitland _____	T. Penn. "C" _____
B. Salt _____	T. Atoka _____	11,441	T. Pictured Cliffs _____	T. Penn. "D" _____
T. Yates _____	T. Miss _____	12,526	T. Cliff House _____	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____		T. Menefee _____	T. Madison _____
T. Queen _____	T. Silurian _____		T. Point Lookout _____	T. Elbert _____
T. Grayburg _____	T. Montoya _____		T. Mancos _____	T. McCracken _____
T. San Andres _____	T. Simpson _____		T. Gallup _____	T. Ignacio Qtzite _____
T. Glorieta _____	T. McKee _____		Base Greenhorn _____	T. Granite _____
T. Paddock _____	T. Ellenburger _____		T. Dakota _____	T. _____
T. Blinbry _____	T. Gr. Wash _____		T. Morrison _____	T. _____
T. Tubb _____	T. Granite _____		T. Todillo _____	T. _____
T. Drinkard _____	T. Delaware Sand _____	2,491	T. Entrada _____	T. _____
T. Abo _____	T. Bone Springs _____	6,044	T. Wingate _____	T. _____
T. Wolfcamp _____	T. Dean _____	8,934	T. Chinle _____	T. _____
T. Penn. _____	T. _____		T. Permian _____	T. _____
T. Cisco (Bough C) _____	Not Pres _____		T. Penn. "A" _____	T. _____

OIL OR GAS SANDS OR ZONES

No. 1, from _____	5,700	to _____	5,720	No. 4, from _____	12,144	to _____	12,152
	11,150		11,160		2,508		2,512
No. 2, from _____		to _____		No. 5, from _____		to _____	
No. 3, from _____	12,076	to _____	12,081	No. 6, from _____	2,532	to _____	2,539

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from _____	Drilled with _____	to _____	Rotary. Information not available.	_____
No. 2, from _____		to _____	_____	_____
No. 3, from _____		to _____	_____	_____
No. 4, from _____		to _____	_____	_____

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0'	400'	400'	Red Bed & Anhydrite				
400'	1440'	1040'	Anhydrite				
1440'	1580'	140'	Anhydrite & Sand				
1580'	2275'	695'	Anhydrite & Salt				
2275'	5550'	3275'	Anhydrite & Sand				
5550'	5754'	204'	Lime & Sand				
5754'	5895'	141'	Sand, Shale, Lime				
5895'	9955'	4060'	Lime & Shale				
9955'	11940'	1985'	Shale & Lime				
11940'	12089'	149'	Sand, Lime & Shale				
12089'	12390'	301'	Sand & Shale				
12390'	12466'	76'	Shale, Sand & Lime				
12466'	12574'	108'	Shale				

NEW METHOD OF CONSERVATION MISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 8-18-78		OCT 2 1978	
Company Cities Service Company						Name El Paso NATURAL GAS CO.			
Well No. 100. ng Strawn gas <i>Walsh Strawn</i>						Unit O.C.C. ARTESIA, OFFICE			
Completion Date 6-27-78		True Length 12,574'		Packback To 12,165'		Elevation 3025.5 GR.		Farm or Lease Name Polk "A" Com.	
Well Size 5 1/2"	Wt. 20#	d 4.778"	Set At 12,574'	Perforations: From 11,152 To 11,158		Well No. 1			
Thg. Size 2 3/8	Wt. 4.7#	d 1.995"	Set At 10,563	Perforations: From OPEN ENDED		Unit B 17 23S 28E		Sec. Twp. Rge. 17 23S 28E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple G.G. Dual						Packer Set At 10,560'		County Eddy	
Producing Thru TBG		Reservoir Temp. °F 182 @ 10,585'		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2		State N. Mex.	
L 10,585	H	Gg .626	% CO ₂ .274	% N ₂ 1.224	% H ₂ S	Prover	Meter Run 4"	Taps Flange	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
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
1.	4 x 1.500			420	16	109	5630				72 hrs.
2.	4 x 1.500			430	25	65	3955				hr.
3.	4 x 1.500			430	37.2	99	2300				1hr.
4.	4 x 1.500			450	53.3	105	1055				1hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super. Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	10.84	83.25	433.2	.9560	1.264	1.030	1123
2	10.84	105.26	433.2	.9952	1.264	1.041	1494
3	10.84	128.40	443.2	.9645	1.264	1.033	1753
4	10.84	157.13	463.2	.9594	1.264	1.033	2134
5.							

NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio dry Mcf/bbl.	
1	.65	569	1.56	.943	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.	
2	.66	525	1.44	.923	Specific Gravity Separator Gas .626 X X X X X X X X	
3	.66	559	1.53	.938	Specific Gravity Flowing Fluid X X X X X	
4	.69	565	1.55	.938	Critical Pressure 671 P.S.I.A. _____ P.S.I.A.	
5.					Critical Temperature 365 R _____ R	

* P _c 5715.5 P _c ² 32666.9				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1	5144.2	4107.1	16868.3	15798.6
2	4389.2	3455.6	11941.2	20825.7
3	3199.2	2473.7	6119.2	26547.7
4	1404.2	1100.4	1210.9	31456.0
5				

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.038$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.036$$

$$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.211$$

Apparent Open Flow 2,211	Mcf @ 15.025	Angle of Slope θ 47	Slope, n .937
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Remarks: ***Calculated from known bottom hole pressure 6934.2, Bottom hole pressures measured with kuster gauge.**

Approved By Commission:	Conducted By: B.R.D.	Calculated By: R.R.	Checked By: J.W.W.
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WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_c or P_w)

FROM KNOWN BOTTOM HOLE PRESSURE (P_f or P_s)

COMPANY Cities Service LEASE 201KA WELL NO. 1 DATE 8-18-78

LOCATION: Unit Section Township Range

L 10, 585 H 10, 585 LH 100 G 1626 % CO₂ % N₂ % H₂S

GH 6626 P_{CT} 671 T_{CT} 365

TABLE IX & X

LINE	1	2	3	4	5	6	7	8
1	T_w (W.H. °R)	534						
2	T_s (B.H. °R)	640						
3	$T = \frac{T_w + T_s}{2}$	587						
4	Z (Est.)	1.151						
5	TZ	675.6						
6	GH/TZ	9.907						
7	e^S (Table XIV)	1.445						
8	P_f or P_s	6934.2						
9	P_f^2 or P_s^2	48083.1						
10	$P_c^2 = P_f^2/e^S$ or $P_w^2 = P_s^2/e^S$	33287.0						
11	P_c or P_w	5769.5						
12	$P_c \left(\frac{P_w + P_s}{2} \right)$ or $\left(\frac{P_c + P_f}{2} \right)$	6351.8						
13	$P_r = (P/P_{CT})$	9.47						
14	$T_r = (T/T_{CT})$	1.61						
15	Z (Table XI)	1.095						

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_c or P_w)

Form C-122F
Adopted 9-1-65

FROM KNOWN BOTTOM HOLE PRESSURE (P_f or P_s)

COMPANY CITIES SERVICE LEASE SOLK A WELL NO. 1 DATE 8-18-78

LOCATION: Unit LH 1.00 Section G Township 626 Range 585

L 10,585 H 10,585 G 626 % CO₂ 587 % N₂ 534 % H₂S 534

GH 6626 P_{CT} 671 T_{CT} 365

TABLE IX & X

LINE	1	2	3	4	5	6	7	8
1	$T_w (W.H. \cdot R)$	534	534	534	534	534	534	534
2	$T_s (B.H. \cdot R)$	640	640	640	640	640	640	640
3	$T = \frac{T_w + T_s}{2}$	587	587	587	587	587	587	587
4	Z (Est.)	982	940	920	885	837	857	868
5	TZ	576.4	551.8	540.0	519.5	491.3	503.1	505.5
6	GH/TZ	11.495	10.008	12.269	12.755	13.486	13.720	13.004
7	e^S (Table XIV)	1.539	1.569	1.584	1.613	1.658	1.673	1.639
8	P_f or P_s	5144.2	5144.2	4389.2	4389.2	3199.2	3199.2	1404.2
9	P_f^2 or P_s^2	26462.8	26462.8	19265.1	19265.1	10239.9	10239.9	1971.8
10	$P_c^2 = P_f^2/e^S$ or $P_w^2 = P_s^2/e^S$	17196.1	16868.1	12160.5	11591.2	6172.3	6119.4	1210.8
11	P_c or P_w	4146.8	4107.1	3487.2	3455.6	2473.7	2473.7	1100.4
12	$P = \frac{P_w + P_s}{2}$ or $\left(\frac{P_c + P_f}{2}\right)$	4645.5	4625.6	3938.2	3922.4	2841.8	2836.5	1252.3
13	$P_T = (P/P_{CT})$	6.52	6.89	5.87	5.85	4.24	4.23	1.86
14	$T_T = (T/T_{CT})$	1.61	1.61	1.61	1.61	1.61	1.61	1.61
15	Z (Table XI)	940	938	1885	1884	1823	1823	1868

Cities Service Company "k" "A" No. 1
 ABS. Slope (N)= $Q1=519-3,715585$
 $Q2=600=2,778151$
 $(N)=937434$

August 18, 1978
 C A O F = 2134 $\cdot 2666.9) .937=2,211$ MCF/Day
 31456.0

