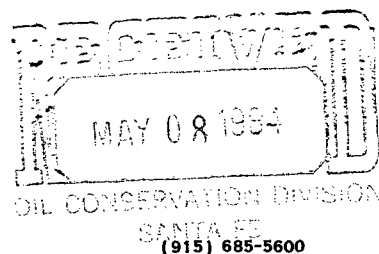




CITIES SERVICE OIL AND GAS CORPORATION
BOX 1919
MIDLAND, TEXAS 79702



May 3, 1984

Mr. Joe D. Ramey, Director
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: Exception to Rule 303-C to Permit
Downhole Commingling For Cities
Service Oil and Gas Corporation's
Byers B Well No. 2, Nadine, Blin-
bry, West and Nadine, Drinkard,
West Pools, Lea County, New Mexico

Dear Mr. Ramey:

Cities Service respectfully requests administrative approval for an
exception to Rule 303-C to permit downhole commingling of the Blin-
bry and Drinkard oil for the above captioned well.

Please find attached all pertinent data regarding this application
as outlined in Rule 303-C filings.

Yours very truly,

CITIES SERVICE OIL AND GAS CORPORATION

Elmer Startz

Elmer Startz
Region Operations Manager - Production
Southwest Region
E & P Division

ES:JME:jme
attachments

cc: New Mexico Oil Conservation Division
District I Office
P.O. Box 1980
Hobbs, New Mexico 88240

A SUBSIDIARY OF OCCIDENTAL PETROLEUM CORPORATION

ORIGINAL SIGNED BY JERRY SEXTON

APPROVED BY DISTRICT I SUPERVISOR

CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

MAR 8 1984
DATE _____

1. Operator:

Cities Service Oil and Gas Corporation - P.O. Box 1919 - Midland, Texas 79702

2. Lease, Well and Location:

Byers B #2, 2080'FNL & 1980'FEL of Sec. 7-T20S-R38E, Lea County, New Mexico

3. Producing Zones:

Currently producing from the Drinkard Zone with the Blinebry Zone being separated by a packer

4. Current 24 hour Productivity Test:

See attached State Forms C-103 and C-105

5. Estimated Bottom-hole Pressure for Each Artificially Lifted Zone:

See attached bottom-hole pressure calculation sheet

6. Well History:

See attached State Forms C-103 and C-105

7. Description of the Fluid Characteristics of Each Zone:

The Blinebry Oil has a corrected gravity of 38.9° with a 0.42 WT % total Sulfur content and the Drinkard Oil has a corrected gravity of 35.7° with a 0.40 WT % total Sulfur content. With these gravities and Sulfur contents both the Blinebry and Drinkard oils are classified as intermediate. See attached oil gravity calculation of commingled crudes.

8. Formula for the Allocation of Production to Each Commingled Zone:

The Blinebry Zone had a test of 5 BOPD and the Drinkard Zone had a test of 19 BOPD. Using these tests as guides, the Blinebry Zone should have 20 percent and the Drinkard Zone should have 80 percent of the commingled oil production.

9. Notice to all Offset Operators:

Please be advised that all of the attached offset operators have been informed of our proposed commingling by the mailing of a complete set of this application.

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U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	7. Unit Agreement Name
2. Name of Operator Cities Service Oil and Gas Corporation	8. Farm or Lease Name Byers B
3. Address of Operator P.O. Box 1919 - Midland, Texas 79702	9. Well No. 2
4. Location of Well UNIT LETTER <u>G</u> <u>2080</u> FEET FROM THE <u>North</u> LINE AND <u>1980</u> FEET FROM THE <u>East</u> LINE, SECTION <u>7</u> TOWNSHIP <u>20S</u> RANGE <u>38E</u> N.M.P.M.	10. Field and Pool, or Wildcat Nadine, Drinkard, West
15. Elevation (Show whether DF, RT, GR, etc.) 3563' GR	12. County Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	OTHER <u>Well Completion Data</u> <input checked="" type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

T.D. 7100' Lime, PBTD 6952'. Well Complete. MIRU completion unit and DO to 7045'. Perforated the Drinkard Zone w/1 SPF @ 6870, 71, 99, 6900, 10, 15, 16, 17, 72, 74, 76, 78, 91, 92 and 6993'. RIH w/5-1/2" RTTS on 2-7/8" OD tubing and set RTTS @ 6272'. Acidized Drinkard Perfs 6870 - 6993' w/5000 gals 15% HCL acid. Max press 3700#, min press 2800#, AIR 4.0 BPM, ISIP 2700#, 5 min SIP 2100#, 10 min SIP 1750#, 15 min SIP 1600#, 45 min SIP 400#. 36 hr SITP 450#. Swabbed 9 BO + 136 BW/8 hrs. Released RTTS set @ 6272' and reset @ 6955'. Swabbed 3 BO + 125 BW/7 hrs. thru Drinkard Perfs 6972 - 6993'. Pulled tubing and RTTS. Set a CIBP @ 6952'. RIH w/5-1/2" RTTS on 2-7/8" OD tubing and set RTTS @ 6752. Swabbed 4 BO + 46 BW/8 hrs. Acidized Drinkard Perfs 6870 - 6917' w/2500 gals 15% HCL acid. Max press 5000#, min press 2000#, AIR 3.9 BPM, ISIP 2100#, 5 min SIP 1900#. Swabbed 17 BO + 14 BS/8 hrs. Pulled tubing and RTTS. Perforated the Blinebry Zone w/2 SPF @ 5889, 90, 91, 92, 93, 96 and 5901'. RIH w/5-1/2" RTTS and RBP on 2-7/8" OD tubing and set RBP @ 6202' and RTTS @ 5762'. Swabbed 0 BO + 14 BW/3 hrs. Acidized Blinebry Perfs 5889 - 5901' w/5000 gals 15% HCL acid. Max press 5800#, min press 2800#, AIR 4.1 BPM, ISIP 2400#, 5 min SIP 2300#, 15 min SIP 2300#. Swabb-d 5 BO + 10 BLW/8 hrs. Pulled tubing and RTTS. Fraced Blinebry Perfs 5889 - 5901' down 5-1/2" casing w/32,000 gals 30# cross linked 2% KCL gelled water + 36,000# 20/40 sand. Max press 3700#, min press 2850#, AIR 13 BPM, ISIP 2660#, 5 min SIP 2520#, 10 min SIP 2470#, 15 min SIP 2440#, 60 min SIP 2400#. Ran and set 2-7/8" OD tubing @ 5997'. Ran rods and a BHP and put well on pump. Pumped 5 BO + 30 BW/24 hrs. Pulled tubing, rods and BHP.

(CONTINUED ON REVERSE SIDE)

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Elmer Stutz TITLE Region Operations Manager - Prod DATE 3-5-84

ORIGINAL SIGNED BY JERRY SEXTON APPROVED BY DISTRICT SUPERVISOR TITLE _____ DATE MAR 8 1984

CONDITIONS OF APPROVAL, IF ANY:

HOSEA OFFICE
050

1984

2 4/11/84

Ran tubing and pulled RBP set @ 6202'. RIH w/5-1/2" RITS on 2-7/8" OD tubing and set RITS and tubing @ 6797'. Ran rods and a 2-1/2" x 1-1/4" x 24' BHP and put well on pump. Pumped on potential, from Drinkard Perfs 6870 - 6917', 19 BO + 17BW/24 hrs., GOR 907, Grav. 34.3°.

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Form C-105
Revised 11-1-84

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

5a. Indicate Type of Lease
State ☐ Fee ☒
5. State Oil & Gas Lease No.

1a. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/>						7. Unit Agreement Name	
b. TYPE OF COMPLETION NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/>						8. Farm or Lease Name Byers B	
2. Name of Operator Cities Service Oil and Gas Corporation						9. Well No. 2	
3. Address of Operator P.O. Box 1919 - Midland, Texas 79702						10. Field and Pool, or Wildcat Nadine, Drinkard, West	
4. Location of Well UNIT LETTER <u>G</u> LOCATED <u>2080</u> FEET FROM THE <u>North</u> LINE AND <u>1980</u> FEET FROM THE <u>East</u> LINE OF SEC. <u>7</u> TWP. <u>20S</u> RGE. <u>38E</u> NMPM						11. County Lea	
15. Date Spudded 12-8-83		16. Date T.D. Reached 12-25-83		17. Date Compl. (Ready to Prod.) 3-2-84		18. Elevations (DF, RKB, RT, GR, etc.) 3563' GR	
19. Elev. Casinghead 3563'		20. Total Depth 7100'		21. Plug Back T.D. 6952'		22. If Multiple Compl., How Many	
23. Intervals Drilled By 0 - T.D. 7100'						24. Producing Interval(s), of this completion - Top, Bottom, Name 6870 - 6917' - Drinkard	
25. Was Directional Survey Made No						26. Type Electric and Other Logs Run CNL, LDT, GR-Cal., DLL-MSFL & Deviation Survey	
27. Was Well Cored No						28. CASING RECORD (Report all strings set in well)	
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE	
8-5/8"		24#		1552'		12-1/4"	
5-1/2"		17#		7100'		7-7/8"	
29. LINER RECORD				30. TUBING RECORD			
SIZE		TOP		BOTTOM		SACKS CEMENT	
31. Perforation Record (Interval, size and number) 1 SPF @ 6870, 71, 99, 6900, 10, 15, 16 and 6917'				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED					
6870 6917'		7500 gals 15% HCL acid					
33. PRODUCTION							
Date First Production 1-6-84		Production Method (Flowing, gas lift, pumping - Size and type pump) Pumping - 2-1/2" x 1-1/4" x 24' - Insert				Well Status (Prod. or Shut-in) Producing	
Date of Test 3-2-84		Hours Tested 24 hrs.		Choke Size		Prod'n. For Test Period	
Flow Tubing Press.		Casing Pressure		Calculated 24-Hour Rate		Oil - Bbl.	
34. Disposition of Gas (Sold, used for fuel, vented, etc.) Vented						Test Witnessed By P. C. Hayes	
35. List of Attachments Above listed logs and 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 <u>Elmer Stutz</u>		TITLE <u>Reg. Opr. Mgr. - Prod.</u>				DATE <u>3-5-84</u>	

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 _____	T. Ojo Alamo _____	T. Penn. "B" _____
T. Salt _____	T. Strawn _____	T. Kirtland-Fruitland _____	T. Penn. "C" _____
B. Salt _____	T. Atoka _____	T. Pictured Cliffs _____	T. Penn. "D" _____
T. Yates _____ 2740'	T. Miss _____	T. Cliff House _____	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____	T. Menefee _____	T. Madison _____
T. Queen _____ 3562'	T. Silurian _____	T. Point Lookout _____	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos _____	T. McCracken _____
T. San Andres _____ 4106'	T. Simpson _____	T. Gallup _____	T. Ignacio Qtzte _____
T. Glorieta _____ 5353'	T. McKee _____	Base Greenhorn _____	T. Granite _____
T. Paddock _____	T. Ellenburger _____	T. Dakota _____	T. _____
T. Blinberry _____ 5850'	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb _____ 6392'	T. Granite _____	T. Todilto _____	T. _____
T. Drinkard _____ 6731'	T. Delaware Sand _____	T. Entrada _____	T. _____
T. Abo _____ 7028'	T. Bone Springs _____	T. Wingate _____	T. _____
T. Wolfcamp _____	T. Rustler _____ 1472'	T. Chinle _____	T. _____
T. Penn. _____	T. _____	T. Permian _____	T. _____
T. Cisco (Bough C) _____	T. _____	T. Penn. "A" _____	T. _____

OIL OR GAS SANDS OR ZONES

No. 1, from _____ to _____	No. 4, from _____ to _____
No. 2, from _____ to _____	No. 5, from _____ to _____
No. 3, from _____ to _____	No. 6, from _____ to _____

IMPORTANT WATER SANDS

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

No. 1, from _____ to _____	feet. _____
No. 2, from _____ to _____	feet. _____
No. 3, from _____ to _____	feet. _____
No. 4, from _____ to _____	feet. _____

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	1560	1560	Surface Rock, Red Beds & Anhydrite				
1560	3350	1790	Salt & Anhydrite				
3350	3945	595	Anhydrite & Lime				
3945	4520	575	Lime				
4520	4930	410	Lime & Sand				
4930	7100	2170	Lime				
			T.D. 7100'				

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MAR 7 1984
O.C.D.
HOLES OFFICE

BOTTOM-HOLE PRESSURE CALCULATIONS

DRINKARD

300# surface pressure
1470' fluid, 50% oil & 50% water

735' oil x .364 psi/ft = 267.5 psi
735' water x .4463 psi/ft = 328.0 psi
5400' gas x .0077 psi/ft = 41.6 psi

BHP = 300 + 268 + 328 + 42 = 938 psi

BLINEBRY

350# surface pressure
2189' fluid, 33% oil & 67% water

722' oil x .359 psi/ft = 259.2 psi
1467' water x .4463 psi/ft = 654.7 psi
3200' gas x .009 psi/ft = 28.8 psi

BHP = 350 + 259 + 655 + 29 = 1293 psi

OIL GRAVITY CALCULATION OF COMMINGLED CRUDES

Blinebry Oil: 5 BOPD @ 38.9° API
Drinkard Oil: 19 BOPD @ 35.7° API

$$\text{Combined Oil Gravity} = \frac{5(38.9) + 19(35.7)}{24} = 36.4^{\circ} \text{ API}$$

Value Blinebry Oil = 5 BOPD x \$29.96/bbl = \$149.80/day
Value Drinkard Oil = 19 BOPD x \$29.90/bbl = \$568.10/day

Total Value of Separate Streams = \$717.90/day

Estimated Value of Commingled Oil = 24 BOPD x \$29.92/bbl = \$718.08/day

OFFSET OPERATORS TO CITIES' BYERS B WELL NO. 2

L. B. Burleson, Inc. - P.O. Box 2479 - Midland, Texas 79702

Morris R. Antwell - P.O. Box 2010 - Hobbs, New Mexico 88240

Crown Central Petroleum Corporation - 731 West Wadley, Bldg. K - Suite 200
Midland, Texas 79701

Amerada Hess Corporation - P.O. Box 840 - Seminole, Texas 79360

Texaco, Inc. - P.O. Box 728 - Hobbs, New Mexico 88240

33-1574-107-57

MAY 10 1984

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SANTA FE

DATE May 7, 1984

RE: Proposed MC _____
 Proposed DHC _____ X
 Proposed NSL _____
 Proposed NSP _____
 Proposed SWD _____
 Proposed WFX _____
 Proposed PMX _____

I have examined the application for the:

and my recommendations are as follows:

O.K. --- J.S.

Yours very truly,

Samuel S. Sefton
/mc