



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

GARREY CARRUTHERS
GOVERNOR

1-8-88

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

DHC-688

RE: Proposed:

MC	_____
DHC	<u>X</u>
NSL	_____
NSP	_____
SWD	_____
WFX	_____
PMX	_____

Gentlemen:

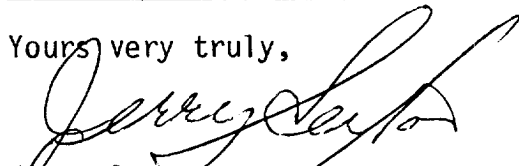
I have examined the application for the:

Zia Energy Inc New Mexico M State #48-D 17-22-37
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,


Jerry Sexton
Supervisor, District 1

/ed

P. O. BOX 2219

ZIA ENERGY, INC.

PHONE (505) 393-2937

HOBBS, NEW MEXICO 88240

January 7, 1988

New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, N.M. 87504-5800

Subject: Request for Administrative Approval for Downhole Commingling

Dear Sir:

(a) Zia Energy, Inc. ("Zia"), P.O. Box 2219, Hobbs, N.M. 88240, respectfully request administrative approval to downhole commingle production in the well described below and to store commingled production in our surface storage facility. Information required by the Commission has been provided below.

(b) Zia requests that downhole commingling be authorized in its New Mexico State "M" Lease, Well No. 48, located in Unit Letter D, Section 17, Township 22 South, Range 37 East, Lea County, N.M. from the Blinebry, Drinkard, and Tubb formations. Royalty and working interest ownership is the same for all three producing zones.

(c) A plat (Exhibit 'A') showing the acreage dedicated to this well and the ownership of offsetting leases is attached.

(d) Division Form C-116 showing recent well test from each of the zones has been attached. Tests from the Blinebry and Drinkard reflect 24 hour pumping test, while the test from the Tubb is based on a swab test. Tests results show that the combined production from all three zones will not exceed the allowable 40 barrels of oil per day nor will the water volumes exceed that amount.

(e) Production decline curves (Exhibit 'B') have been provided for the Drinkard formation. Decline patterns for the Blinebry and Tubb are not available because of the recent completion in these two zones. A copy of the completion report describing treating and testing for each zone has been attached. We believe that production decline rates in the Blinebry and Tubb formations will approximate that of the Drinkard.

(f) Bottom-hole pressures were not measured in this wellbore. However, bottomhole pressures in the Tubb and Blinebry formations are expected to be several hundred pounds higher than that of the Drinkard formation (which is estimated at 450 psi) due to the recent completion of these zones. We do not believe pressure differences pose any problem since the well is equipped to pump and production is from tight, low permeability formations in all three zones.

(g) Fluid sample analyses have been provided from the Blinebry, Drinkard and Commingled production stream. Tests indicate that the fluids will not be incompatible in the well-bore nor will the mixing of formation fluids cause the formation of precipitates.

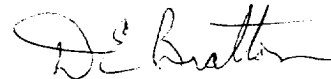
(h) Production from all three zones is priced on the same basis for both oil and gas, therefore the value of oil and gas produced and sold from the commingled stream will be the same as if the streams were produced and sold separately. It should be noted that by downhole commingling production, the economic life of the well can be extended, thereby increasing recovery and revenue from all three formations.

(i) Zia proposes that total production from the three zones be allocated to each formation on the basis of the Form C-116 tests that are being submitted with this request.

(j) We have attached a statement that all offset operators have been notified of our request to downhole commingle.

If you should have any questions concerning our request or the material presented, please contact Don Bratton or Farris Nelson at 505-393-2937.

Sincerely,



D.E. Bratton
Zia Energy, Inc.

Enclosures

cc: NMOCD - Hobbs

Certified P 713 503 717

1/7/88

RECEIVED

JAN 7 1988

012
HOMES OFFICE

EXHIBIT 'A'

Martindale Petr. (Mattern)			Texaco Inc. (Falby)
Section 7	Martindale Petr. (Little-V) 4-V	Section 180 Texaco	8 181 Inc. (Falby)
	13 • Chevron, USA (Christmas)	48 • Zia Energy, Inc. (N.M.'M'State)	•3-B Sun Expl & Prod (Elliott)
Section 18	11 • Chevron, USA (Christmas)	Section 17 Zia Energy, Inc. (N.M.'M'State) Zia Energy, Inc.	Sun Expl & Prod (Elliott)

T-22-S, R-37-E
LEA COUNTY, N.M.

GAS-OIL RATIO TESTS

Operator Zia Energy, Inc.		County Lea												
Address P.O. Box 2219, Hobbs, NM 88240		Tubb												
TYPE OF TEST - (X)		Completion <input type="checkbox"/> Scheduled <input type="checkbox"/> Special <input checked="" type="checkbox"/>												
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT./BBL	
		U	S	T						R	WATER BBLs.	GRAV. OIL		OIL BBLs.
NM State "M" B-934	48	D	17	22S	37E	12-4-87	P	0	24	0	-	.5	TSTM	-

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

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 301 and appropriate pool rules.

[Signature]

(Signature)

Engineer

(Title)

RECEIVED

JAN 7 1988

CCO

WORKS OFFICE

GAS-OIL RATIO TESTS

Operator		Pool		County											
Zia Energy, Inc.		Blinebry		Lea											
Address		TYPE OF TEST - (X)		Completion <input type="checkbox"/> Scheduled <input type="checkbox"/> Special <input checked="" type="checkbox"/>											
P.O. Box 2219, Hobbs, NM 88240															
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW. ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT./BBL		
		U	S	T						R	WATER BBL'S	GRAV. OIL		OIL BBL'S	GAS M.C.F.
NM State "M" B-934	48	D	17	22S	37E	12-2-87	P	-	0	24	12	36.9	8.5	58	6824

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

Dee Brath

(Signature)

Engineer

(Title)

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 131 and appropriate pool rules.

GAS-OIL RATIO TESTS

Operator		Pool		County		Lea									
Zia Energy, Inc.		Drinkard													
Address		TYPE OF TEST - (X)		Completion <input type="checkbox"/> Scheduled <input type="checkbox"/>		Special <input checked="" type="checkbox"/>									
P.O. Box 2219, Hobbs, NM 88240															
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU.FT./BBL	
		U	S	T						R	WATER BBL'S	GRAV. OIL	OIL BBL'S		GAS M.C.F.
NM State "M" B-934	48	D	17	22S	37E	11-15-87	P	-	4	24	3	38.0	4.5	28	6222

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

No well will be assigned an allowable greater than the amount of oil produced on the official test.
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.
Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.
Report casing pressure in lieu of tubing pressure for any well producing through casing.
Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 101 and appropriate pool rules.

D. C. Brath
(Signature)
Engineer
(Title)

EXHIBIT 'B'

N.M. 'M' State # 48 (Sect. 17, T-22-S, R-37-E)

10000

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10

Gas Prod. (MCFPM)

Oil Prod. (BOPM)

Water Prod. (BWPM)

Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.				
19 85				19 86				19 87				19				19				19				19				19				19			

47 6840

K-E 20 YEARS BY MONTHS X 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.O.B.	
LAND OFFICE	
OPERATOR	

3a. Indicate Type of Lease
State ☒ Fee ☐
5. State Oil & Gas Lease No.
B-934

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- 2. Name of Operator Zia Energy, Inc. 3. Address of Operator P.O. Box 2219, Hobbs, NM 88240 4. Location of Well UNIT LETTER D 660 FEET FROM THE North- LINE AND 560 FEET FROM THE West LINE, SECTION 17 TOWNSHIP 22 South RANGE 37 East NMPM.	7. Unit Agreement Name 8. Farm or Lease Name New Mexico 'M' State 9. Well No. 48 10. Field and Pool, or Wildcat Drinkard 12. County Lea
15. Elevation (Show whether DF, RT, GR, etc.) 3416' RKB 3404' GR	

16. 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 checked="" 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"/>	

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

1. Set RBP at 6313'. Perforated Tubb from 6095'-6227' (19 Holes). Set Pkr at 6066'. Treated Tubb with 5000 gals 15% NEFE Acid. ISIP 1200 psi
2. Set RBP at 6066'. Perforated Blinebry from 5496'-6045' (49 Holes). Set Pkr at 5376'. Treated Blinebry with 15,000 gals 15% NEFE Acid in three 5000 gal stages, using rock salt and 7/8" balls for staging. ISIP 1150 psi
3. Released Pkr. RIH with pump and rods. Placed Blinebry on test 11-20-87. Tested 8.5 BOPD, 12 BWPD, and 58 MCFPD on 12-2-87.
4. POH with rods and pump 12-3-87. Isolated Tubb perfs and swab tested. Estimated recovery of .5 BOPD, no water, and gas to small to measure 12-4-87.
5. POH with Pkr and RBP. Commingled production from the Blinebry, Drinkard and Tubb formations. Placed well on pump. Well tested 13.5 BOPD, 18 BWPD, and 72 MCFPD on 12-16-87.

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

SIGNED DE Bratton TITLE Engineer DATE 1-04-88

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

Unichem International

707 North Leech

P.O. Box 1499

Hobbs, New Mexico 88240

Company: Zia Energy, Inc.

Date : 01-06-88

Samples: Formation water from the Blinebry & Drinkard, Commingled Oil & Water
from the Blinebry, Drinkard, and Tubb

		<u>Sample 1</u> (Blinebry)	<u>Sample 2</u> (Drinkard)	<u>Sample 3</u> (Commingled)	<u>Sample 4</u> (Commingled)
Specific Gravity (Water):		1.131	1.145	1.160	1.135
Total Dissolved Solids:		183795	203177	223875	188641
ph:		6.11	5.86	5.46	6.05
Ionic Strength:		3.682	4.192	4.776	3.809
<u>Cation:</u>		<u>mg/liter</u>	<u>mg/liter</u>	<u>mg/liter</u>	<u>mg/liter</u>
Calcium (Ca +2)		7520	8960	13200	7880
Magnesium (Mg +2)		5640	8160	10200	6270
Sodium (Na +1)		55100	57400	57800	55700
Iron (total) (Fe +2)		1.70	8.20	141	3.32
Barium (Ba +2)		0.120	0.120	0.990	0.120
<u>Anions:</u>					
Bicarbonate (HCO ₃ -1)		305	85.4	85.4	250
Carbonate (CO ₃ -2)		0	0	0	0
Hydroxide (OH -1)		0	0	0	0
Sulfate (SO ₄ -2)		2200	1580	1630	2040
Chloride (Cl -1)		113000	127000	141000	117000
<u>Salting Index (positive value indicates scale)</u>					
Calcium Carbonate		0.41	-0.07	0.10	0.34
Calcium Sulfate		13	7.4	18	12

Comments:

Sample 3 is an actual commingled sample of Blinebry, Drinkard, and Tubb production taken from NM State "M" Well No. 48 on 12-29-87

Sample 4 is a mix of samples 1 & 2 (Sample 1-75% and Sample 2-25%)

All Samples show fluids to be compatible. No precipitates are expected as a result of commingling.

CERTIFICATE OF SERVICE

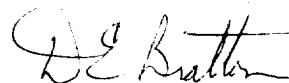
I, D.E. Bratton , certify that a copy of the attached letters, dated January 5, 1988 was mailed, first-class, certified, postage prepaid, on this 7 th day of January , 1988 to the following companies.

Texaco Producing Company
P.O. Box 3109
Midland, Texas 79702

Sun Exploration and Production Company
P.O. Box 2880
Dallas, Texas 75221

Chevron, U.S.A.
P.O. Box 670
Hobbs, N.M. 88240

Martindale Petroleum Company
419 W. Cain
Hobbs, N.M. 88240



D.E. Bratton
Zia Energy, Inc.

Attachments

P. O. BOX 2219

ZIA ENERGY, INC.

PHONE (505) 393-2937

HOBBS, NEW MEXICO 88240

January 5, 1988

Martindale Petroleum Company
419 W. Cain
Hobbs, N.M. 88240

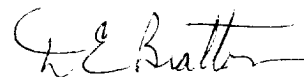
Attn: Mr. Mark Veteto

Re: Zia Energy, Inc.'s application to the New Mexico Oil Conservation Division for Administrative Approval to downhole commingle production in its New Mexico 'M' State, Well No. 48, located in Unit Letter 'D', Section 17, T-22-S, R-37-E, Lea County, N.M.

Dear Sir:

Zia Energy, Inc. has requested from the New Mexico Oil Conservation Division administrative approval to downhole commingle production from the Blinbry, Drinkard, and Tubb formations in its New Mexico 'M' State, Well No. 48 at the above location. As an owner of offset acreage to the subject well, we are required to notify you of our request for commingling.

Sincerely,



D.E. Bratton
Zia Energy, Inc.

Certified P 713 503-721
Date Mailed 1/7/88

P. O. BOX 2219

ZIA ENERGY, INC.

PHONE (505) 393-2937

HOBBS, NEW MEXICO 88240

January 5, 1988

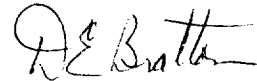
Chevron, U.S.A.
P.O. Box 670
Hobbs, N.M. 88240

Re: Zia Energy, Inc.'s application to the New Mexico Oil Conservation Division for Administrative Approval to downhole commingle production in its New Mexico 'M' State, Well No. 48, located in Unit Letter 'D', Section 17, T-22-S, R-37-E, Lea County, N.M.

Dear Sir:

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Sincerely,



D.E. Bratton
Zia Energy, Inc.

Certified P 713 503. 720
Date Mailed 1/7/88

RECEIVED
JAN 7 1968
GOD
HOSPITAL OFFICE

P. O. BOX 2219

ZIA ENERGY, INC.

PHONE (505) 393-2937

HOBBS, NEW MEXICO 88240

January 5, 1988

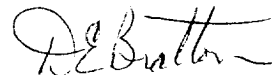
Sun Exploration and Production Company
P.O. Box 2880
Dallas, Texas 75221

Re: Zia Energy, Inc.'s application to the New Mexico Oil Conservation Division for Administrative Approval to downhole commingle production in its New Mexico 'M' State, Well No. 48, located in Unit Letter 'D', Section 17, T-22-S, R-37-E, Lea County, N.M.

Dear Sir:

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Sincerely,



D.E. Bratton
Zia Energy, Inc.

Certified P 713 523 719
Date Mailed 1/7/88

P. O. BOX 2219

ZIA ENERGY, INC.

PHONE (505) 393-2937

HOBBS, NEW MEXICO 88240

January 5, 1988

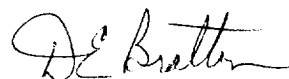
Texaco Producing Company
P.O. Box 3109
Midland, Texas 79702

Re: Zia Energy, Inc.'s application to the New Mexico Oil Conservation Division for Administrative Approval to downhole commingle production in its New Mexico 'M' State, Well No. 48, located in Unit Letter 'D', Section 17, T-22-S, R-37-E, Lea County, N.M.

Dear Sir:

Zia Energy, Inc. has requested from the New Mexico Oil Conservation Division administrative approval to downhole commingle production from the Blinebry, Drinkard, and Tubb formations in its New Mexico 'M' State, Well No. 48 at the above location. As an owner of offset acreage to the subject well, we are required to notify you of our request for commingling.

Sincerely,



D.E. Bratton
Zia Energy, Inc.

Certified P 713 503 718
Date Mailed 1/7/88

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JAN 7 1988

OCD
HOBBY OFFICE