

1000 file

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

APPLICATION OF CHACE OIL COMPANY, INC.  
FOR DOWNHOLE COMMINGLING

The applicant, Chace Oil Company, Inc. is the owner and operator of the Chace Oil Company, Inc. Jicarilla Apache 15, Well No. 3.

The 15-3 well was completed in the Chacon Dakota Associated field September 1, 1977, and recompleted in an Undesignated Gallup group December 6, 1982.

Applicant requests authority for downhole commingling in the subject well of the Chacon Dakota Associated pool with the Undesignated Gallup pool.

The application is presented in the order that the requirements are set forth in the Oil Conservation Division's Rules and Regulations, dated March 1, 1982.

Rule: 303-C

Section 1:

(a) For wells involving oil zones:

- |   | Bbl/day Limit |
|---|---------------|
| 1. Bottom perforation   |               |
| Chacon Dakota Associated - 7224   | 50            |
| Undesignated Gallup - 7074  | 50            |
| Neither zone is expected to exceed the Bbl/day limit.   |               |
| 2. Each of the zones requires artificial lift. Neither is capable of flowing.                           |               |
| 3. "Neither zone produces more water than the combined oil limit as determined in Paragraph (1) above". |               |



4. The fluids from both zones are compatible with the fluids from the other zones, and will not react with each other to cause damage in either of the reservoirs.
5. The total value of the crude will not be reduced by commingling.
6. Ownership of each zone is common.
7. The commingling will not jeopardize the efficiency of any future secondary recovery operations.

Section 2, Paragraphs A-J, 'For approval of downhole commingling':

- (a) Chace Oil Company, Inc.  
313 Washington, SE  
Albuquerque, NM 87108
- (b) The applicant is the owner and operator of the Chace Oil Company, Inc. Jicarilla 15, Well No. 3.

Location: Unit 'F' - 1850' FNL & 1850' FWL  
Section 20, Township 23 North, Range 3 West  
Sandoval County, New Mexico

Pools to be commingled:

Chacon Dakota Associated

Undesignated Gallup

- (c) Plat indicating location of 15-3 well and offsetting location ownership. Attached p. 4.
- (d) Gas Oil ratio form C-116, dated January 14, 1983. Attached p. 5.
- (e) Production decline curve for Dakota production only. Attached p. 6.
- (f) Estimated bottom hole pressure for each artificially lifted zone to be commingled, (PSIA):

Undesignated Gallup 2311

Chacon Dakota Associated 2521

- (g) Fluid characteristics:

All zones produce oil of 40°-45° gravity with little or no water.

(h) Individual production of each zone would not increase or decrease the value of the production. The price per barrel of oil is the same for each producing horizon.

(i) Allocation of Production:

Estimated Oil and Gas:

	<u>Oil</u>	<u>Gas</u>
Dakota	60%	45%
Gallup	40%	55%

(j) Notification of proposed commingling:

The minerals Management service and all offset owners have been notified by attached letters. Waivers from offset operators will be forthcoming as a supplement to this application.

[illegible]

**NEW MEXICO OIL CONSERVATION COMMISSION  
GAS-OIL RATIO TESTS**

C-116  
Revised 1-1-65

Pool Chace Oil Company, Inc.		County Chacon Dakota Associated		Sandoval												
313 Washington, SE, Albuquerque, NM 87108		TYPE OF TEST - (X)		Scheduled <input type="checkbox"/>												
Completion <input type="checkbox"/>		Special <input checked="" type="checkbox"/>														
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 BBL'S.	OIL BBL'S.		GAS M.C.F.	
Chace Apache 15	3	F	20	23N	3W	1-14-83	F	2"	120	5	24	10	44	21	20	952

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 Commission.

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 0.65.

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 Commission in accordance with Rule 30, and appropriate pool rules.

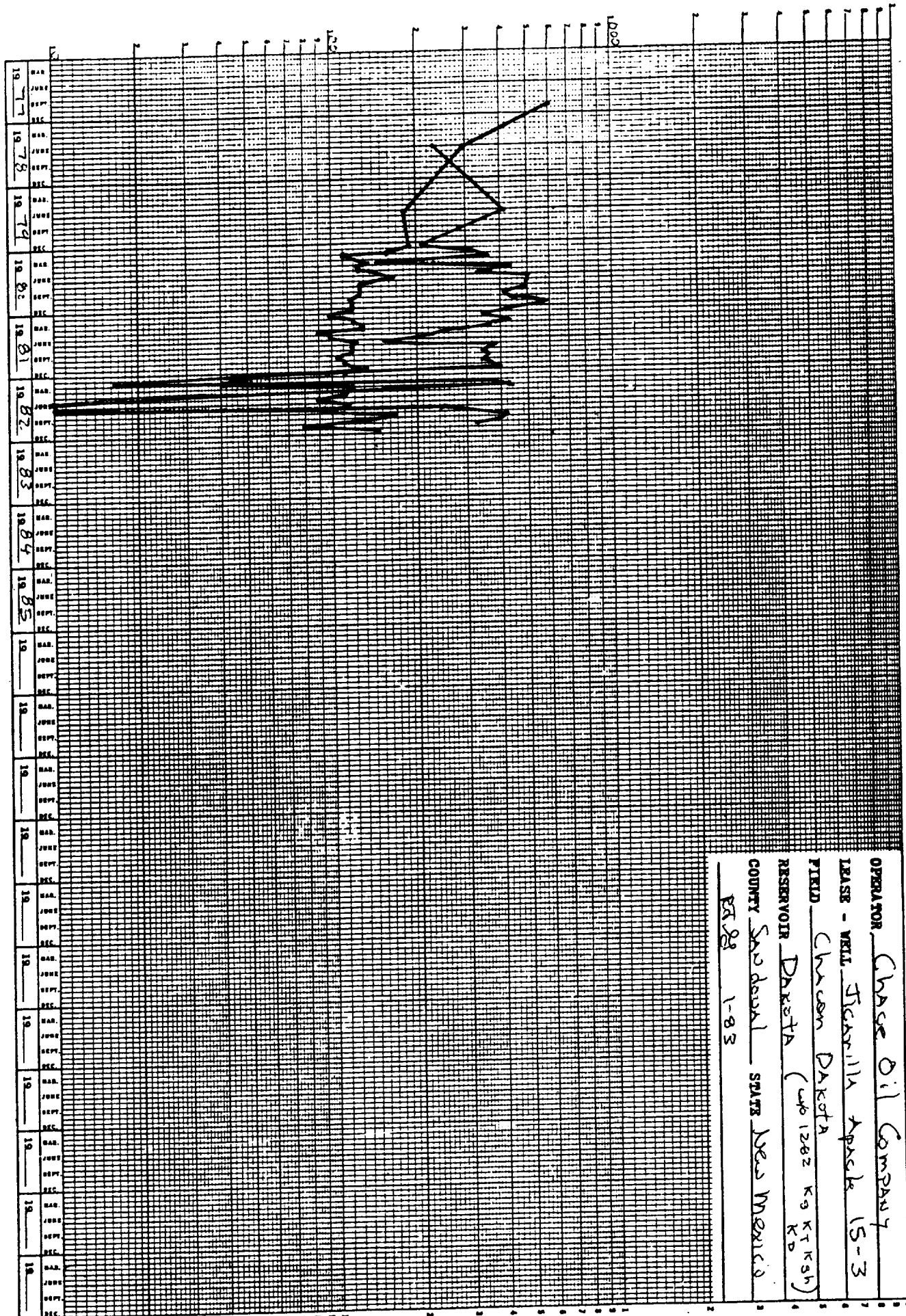
I hereby certify that the above information is true and complete to the best of my knowledge and belief.

*(Signature)*  
 President

1-14-83

(Title)

1200



LEASE - WELL Jicarilla Apache 15-3

**FIELD** Chuson Dakota  
7-14-1982 K9 KTKsh

RESERVOIR Dakota (up to 1000 ft)

COUNTRY Sandwich STATE New Mexico

PS 28 1-83

CHACE APACHE 15-3 PRODUCTION HISTORY

<u>Yearlys:</u>	<u>Bbls/Oil</u>	<u>Mo. Avg.</u>	<u>MCF/Gas</u>	<u>Mo. Avg.</u>
1977	2424	(606)	0	IP 9/77
1978	3575	(298)	2781	(230)
1979	<u>2158</u>	(180)	<u>4908</u>	(409)

1980:

January	187	210
February	158	310
March	112	360
April	136	148
May	123	433
June	134	335
July	163	497
August	125	492
September	123	484
October	122	408
November	115	441
December	<u>118</u>	<u>568</u>
	1616	4686

270

CHACE APACHE 15-3 PRODUCTION HISTORY

	<u>Bbls/Oil</u>	<u>MCF/Gas</u>
<u>1981:</u>		
January	119	418
February	97	350
March	120	421
April	130	366
May	89	259
June	97	229
July	124	155
August	117	378
September	118	347
October	104	358
November	111	342
December	<u>133</u> 113	<u>393</u> 335
<u>1982:</u>		
January	112	51
February	51	17
March	40	370
April	118	437
May	110	24
June	88	0
July	116	10
August	92	245
September	165	419
October	135	391
November	82	327
December	<u>147</u>	<u>          </u>



**CHACE OIL COMPANY, INC.**

313 Washington S.E.

Albuquerque, New Mexico 87108

(505) 266-5562



CHACE APACHE 15-3 WELL

Location Unit "F" - 1850' NL & 1850'WL  
Section 20, T23N - R3W  
Sandoval County, NM

Elevation 7257 GR

Lease Jicarilla Apache Contract 15

Staked May 7, 1977 San Juan Engr. Co.

Location Completed June 21, 1977  
D & R Construction Co.

Notification Send all notices to Cities Service Oil Company  
Attention-Lou Bevactuq, Box 1919, Midland, TX 79701  
and to Reynolds Mining Corp. Attention James K. Jones  
P.O. Box 2346, Richmond, Virginia 22218

Estimated tops on 15-3 as compared with 15-2.

<u>FORMATION</u>	<u>ESTIMATED TOPS</u> <u>Chace Apache 15-3</u>	<u>ACTUAL TOPS</u> <u>Chace Apache 15-1</u>
Pictured Cliffs	2922'	2915'
Lewis Shale	3012'	3005'
Chacra	3274'	3267'
Cliff House	4467'	4460'
Point Lookout	5022'	5015'
Add LCM @ 6090'		
Gallup	6127'	6120'
Greenhorn	7067'	7060'
Dakota "A"	7159'	7152'
Dakota "B"	7259'	7255'
Dakota "D"	7357'	7350'
Burro Canyon	7433'	7426'
Total Depth	7550'	7525'

Coleman Drilling Co. - driller

8-2-77 Spudded 12:30 a.m. 8-2-77  
Drilled 10 3/4" hole to 270' - 1° deviation. Ran 9 jts.  
8 5/8" 23# surface casing to 238.55' Ground and 253.05' KB  
Cemented with 200 sxs Class B cmt with 6% calcium chloride  
Plug down at 8 am WOC.

8-2-77 Drilling at 1703' Bit #2  
Mud wt. 9.6  
Vis. 38  
W.L. 12 cc's  
Oil 10%

8-3-77 Drilling at 2657' Bit #3  
Made trip at 2058'  
Survey 1°  
Mud wt. 8.9  
Vis. 52  
W.L. 5.8  
Oil 10%

8-4-77 Tripping at 3500' Bit #4  
Mud wt. 9.2  
Vis. 35  
W.L. 6.4  
Oil 9%

8-7-77 Drilling at 5360'  
Mud wt. 9  
Viscosity 37  
Water Loss 6cc  
Oil 8%

8-8-77 Drilling at 5768'  
Mud wt. 9.0  
Vis. 40  
Water loss 6 cc's  
Oil 10%  
Lost 150 bbls of mud @5475' adding LCM

8/10/77 8 am Drilling at 6230'  
Bit #6, Mud weight 9#  
Vis. 37  
Water loss 6.8 cc's  
Approx. 6% oil  
Lost 250 bbls mud @ 6240. Gallup Formation

8-11-77 Drilling & reaming out bridges at 1800'  
Total depth before lost circulation 6267'  
M. Wt. 9.0  
Vis. 5.5  
W.L. 7.2 CC's  
Oil 6%

8-12-77 Drilling 6466'  
Mud wt. 8.8#  
Vis. 46  
W. L. 6 cc's  
8% Oil

8-13-77 Drilling 6860'  
Mud wt. 9#  
Vis. 38  
Water Loss 7 cc's  
Oil 8%

- 8-14-77 Drilling 7085'  
Bit #7  
Mud wt. 9  
Vis. 55  
Water Loss 10  
Oil 10%
- 8-15-77 Drilling 7256'  
Mud Wt. 8.8  
Vis. 39  
Water Loss 10  
Oil 8%
- 8-16-77 Reached total depth of 7525'  
Waiting on the logger
- 8-17-77 Pulling out of hole after circulating to condition the hole.  
Mud wt. 9.1  
Vis. 58  
Temp. 180° very gas cut
- 8-18-77 Ran 198 joints of 4½ 11.6# csg set at 7494.61. Float collar 7459.05. Stage collar 3102.75. First stage is 400 sacks 50-50 posmix 2% gel 2# salt 6½# gilsonite per sack. Plug down 9am. 100 sacks 65-35 posmix 12% gel 6½# gilsonite per sack. Plug down 12:30 p.m. 8/19
- 8-19-77 Waiting on completion rig.
- 8-30-77 Aztec completion rig. Moved in rigged up.
- 8-31-77 Drilled out stage collar @ 3102' cleaned out well to bottom of hole. Pulled tbgs. Went in with perforating gun and perforated from 7210' - 7224' 2 shots per foot. Fracked with 81,396 gallons slick water and 80,000# 20- 40 sand. Avg. treating pressure 3250# @ 45 BPM. ISDP 1900# after 15 min. SIP was 1800#. Went in and set bridge plug at 7190'.  
Perforated 7106' - 7140' and 7150' - 7158'.  
Fracked with 115,500 gallons slick water and 116,000# 20-40 sand. Average treating pressure 3350# at 42 BPM. ISDP 2200# after 15 min. 1800#. Shut in.
- 9-1-77 Went in and drilled out bridge plug 7190'. Cleaned out 90 sand in well bore. Came out with bit and ran tubing production string 2-3/8".
- 9-2-77 Moved NOWSCO - Nitrogen truck in and hooked up to casing side. Pressured up and had leak in donut. Hooked up to tubing and cleaned well out. Shut down.
- 9-3-77 Pulled tubing up and changed out donut. Reseated tubing and hooked up nitrogen truck. Built up casing pressure to 2400#. Well unloading water, gas and trace of oil. Shut in overnite.
- 9-4-77 Opened well, flowed water, oil and gas 8 hrs. 2100# on csg and 10# tbgs. Made 19 bbls oil and approx. 120 bbls water - gas increasing. Shut in.

9-5-77

Flowed well 8 hrs. Again oil increasing along with gas.  
No measurement reported.

15-3 RECOMPLETION REPORT:

12/6/82:

9:30 A. M. Rig up workover rig.

10:45 A. M. Start pulling 2 3/8" tubing.

2:30 P. M. Start in hole with bit and scraper. Hydro-test tubing in hole to 4000 PSI.

8:30 P. M. Rig down. Hydro-test truck couldn't test last 15 stands of tubing due to paraffin buildup in tubing.

9:20 P. M. Tag bottom with bit and scraper.

9:35 P. M. Come out of hole with bit and scraper.

11:25 P. M. Go in hole with packer.

12/7/82:

1:00 A. M. Set packer above Dakota perforation @ 7000'.

4:30 A. M. Pressure test casing to 1200 PSI @ 2 BPM.  
Pressure dropped to 0 PSI with a rate of 3.5 BPM.

4:45 A. M. Pull 3 stands of tubing. Try to pressure test casing again.  
Pumped 23 bbls. H<sub>2</sub>O with 0 pressure. Shut down.

5:04 A. M. Pull 10 stands. Pressure test casing again.  
Packer starts leaking. Set more weight down on it.  
Pump on it again. Still have flow out tubing.

5:35 A. M. Shut tubing valve. Pump on it again. 3 BPM @ 800 PSI.  
Shut down.  
Pull 10 more stands of tubing.

5:54 A. M. Pump on it again. Have flow out tubing. Shut tubing in.  
Keep pumping. 2 BPM @ 700 PSI. Shut down.

6:24 A. M. Pull 20 more stands of tubing. Set packer. Try to pressure test casing. Tubing starts flowing. Shut tubing valve.  
Pump @ 2 BPM @ 800 PSI. Leaking by packer. Pull packer out of hole.  
26 stands from bottom found a split joint of tubing.

8:25 A. M. Pressure test tubing with 56 stands in hole. 2000 PSI.

9:18 A. M. Load tubing with 16 bbls. H<sub>2</sub>O.  
Load back side with 4 bbls. H<sub>2</sub>O. Pressure test casing to 3500 PSI. Bleed off to 500 PSI in 2 min.  
Held 500 PSI for 6 min. without any leakoff.  
Test to 3500 PSI again with a rate of 2 BPM.  
Bleed off to 500 PSI in 1 min.

10:26 A. M. Pull 2 stands. Pressure test again. 2 BPM - 0 pressure.

10:45 A. M. Reset packer. Pump on it again. 2 BPM - 0 PSI.  
No returns up tubing.

11:07 A. M. With 88 stands in hole, reset packer. Try to pressure test.  
Pump 20 bbls. H<sub>2</sub>O. 3.2 BPM @ 1300 PSI.  
4.5 BPM @ 1800 PSI.  
Shut down. Pressure dropped to 800 PSI in 10 sec.  
Held 800 PSI for 2 min. No leak off.

11:35 A. M. Reset packer with 72 stands in hole. Try to pressure test.  
Pressure tested to 3500 PSI. Held with no leak off.

11:56 A. M. Reset packer with 80 stands in hole. Pressure test casing.  
While pumping, packer unseated @ 800 PSI.

12:05 P. M. Come out of hole with packer.

1:25 P. M. Out of hole with tubing and packer.  
Go in hole with logging tools. Run gas spectrum and cement  
bond log from 7300' to 6000'.

4:29 P. M. Out of hole with logging tools. CBL showed good cement from  
7300' to 5550'.

4:45 P. M. Go in hole with EZ drill bridge plug.

5:04 P. M. Set plug @ 7000'.

5:27 P. M. Test casing. Pumped 20 bbls. 4 BPM @ 1300 PSI.  
Shut down. Go in hole with RTTS packer.

6:52 P. M. Close tubing testing valve in top of RTTS.  
Pressure test tubing to 3500 PSI.

6:59 P. M. 79 stands of tubing in hole. Set packer @ 4935'. Try to  
pressure up on casing. Pumped into hole in casing at  
2.5 BPM - 1100 PSI.  
Test casing below packer. Casing held.

7:18 P. M. Pull 4 stands of tubing. Set packer. Test casing to  
3500 PSI. It held.  
Test below packer. Would not hold pressure.  
Hole is between 75 and 79 stands of tubing.

7:43 P. M. Pull 5 more stands of tubing. Set packer @ 4373'.  
Pressure up to 700 PSI on back side of tubing.

7:51 P. M. Establish rate @ 2 BPM 1300 PSI with 5 bbls. H<sub>2</sub>O.

7:52 P. M. Start cement. 2½ BPM 1325 PSI.

7:54 P. M. Increase rate to 3.0 BPM @ 1500 PSI.

7:58 P. M. 3.5 BPM @ 1350 PSI

8:01 P. M. 26 bbls. slurry mixed. Cement on formation, (4952').  
1500 PSI, 3½ BPM.

8:05 P. M. 1600 PSI, 3½ BPM.

8:09 P. M. Start displacement. 2100 PSI, 3 BPM.  
Mixed total of 50 bbls. of slurry  
With 15 bbls. displacement in slow rate to ½ BPM, 900 PSI.

8:12 P. M. Shut down. Wait 5 min. Pump @ ½ BPM, 1300 PSI. 20 bbl. disp.  
away.

8:14 P. M. Shut down for 10 min. Then pump ½ BPM, 2100 PSI.  
21 bbl. disp. away.

8:49 P. M. Release packer; reverse circulate tubing. Come out of hole  
with tubing and packer.  
W. O. C. 12 hours.

12/8/82:

9:00 A. M. Tag cement with bit @ 71 stands. (4435').  
Start drilling.

12:48 P. M. Drilled out cement in casing @ 4950'.

1:15 P. M. Pressure tested casing to 1500 PSI. Held pressure.

1:30 P. M. Come out of hole with tubing.  
Go in hole with tubing and mill.

4:30 P. M. Tag EZ drill bridge plug @ 7000'.

7:00 P. M. Milled plug out, and pushed to bottom - 7314'.  
Circulate hole for 1½ hours.

8:30 P. M. Start out of hole with tubing and mill.

9:48 P. M. Out of hole with tubing.  
Go in hole with perforating guns to perforate Dakota "B",  
Dakota "A", and Greenhorn formations.

10:19 P. M. Perforate Dakota "B" zone @ 7150, 7152, 7154, 7156', 7158,  
7210', 7212', 7214', 7216', 7218', 7220' - 4 SPF. 44 holes.

10:51 P. M. Perforate Dakota "A" zone @ 7106', 7108', 7110', 7112', 7114',  
7119', 7123', 7125', 7127', 7129' - 4 SPF - 40 holes.

11:30 P. M. Perforate Greenhorn zone @ 7055', 7057', 7061', 7063', 7066',  
7068', 7070', 7072', 7074' - 4 SPF - 36 holes.

12/9/82:

12:00 A. M. Go in hole with 2 7/8" tubing and RTTS packer.

4:45 A. M. On bottom with tubing and packer - 6515'.

6:15 A. M. Western pressure tests lines.

6:36 A. M. Try to circulate hole. Pressure went to 1000 PSI with no rate. Must have a plug in the tubing.

6:45 A. M. Try to pump on it again. Pressure started climbing. Took it to 3500 PSI. Shut down.

7:15 A. M. Pull 10 stands. Try to pump on it again. Pressure went up to 3500 PSI. Still have a plug in the tubing.

8:00 A. M. Run in tubing with sand line and sinker bar. Tag plug in tubing @ 3000'.

8:25 A. M. Pull tubing to find plug.  
Found a joint of tubing with a rabbit stuck in it.

8:56 A. M. Go back in hole with tubing.

9:52 A. M. Tubing and packer @ 6500'. Circulate hole @ 2 BPM with 89 bbls.

10:40 A. M. Set packer @ 6500'.

10:55 A. M. Pressure up to 1000 PSI on back side.

DAKOTA FRAC

11:09 A. M. Break down. Broke @ 2000 PSI.  
Establish rate - 16 BPM @ 3700 PSI.  
ISIP = 1750 PSI.

11:14 A. M. Start acid. Drop 8 balls/bbl in 9 bbls. of acid.  
1800 PSI @ 3.0 BPM  
Drop 8 balls/bbl in 9 bbls.  
Run 10 bbl spacer  
Drop 6 balls/bbl in 58 bbls. 3000 PSI @ 9 BPM.

11:23 A. M. Balls on formation. 9 BPM @ 2670 PSI.  
Ball action 10 BPM @ 2600 PSI.

11:32 A. M. Surge balls off. Packer lets loose. Casing pressure goes to 1400 PSI. Bleed casing pressure off.  
Casing @ 0. Tubing @ 850 PSI.

12:09 P. M. Pressure up to 1000 PSI on back side.

12:57 P. M. Start pad. 3500 PSI 14.5 BPM

1:07 P. M. 3400 PSI 14.0 BPM

1:32 P. M. 3500 PSI 14.0 BPM

1:39 P. M. 595 bbls. pad away.  
Start 1/2 lb/gal sand 3450 PSI 14.0 BPM

1:42 P. M. 1/2 lb/gal sand  
on formation 3400 PSI 14.0 BPM  
Checked back side pressure. Showed 1800 PSI.  
Bleed pressure back to 1500. Climbs to 1900 PSI.  
Cut sand. 2500 lbs. sand in formation.



1:47 P. M. Go to flush. Slow rate to 8 BPM, 2500 PSI.  
Casing pressure stabilizer @ 1800 PSI.

1:56 P. M. Flush away. 54 bbls. Shut down.  
ISIP = 1750 PSI.

2:50 P. M. With 1000 PSI on tubing and casing, bleed tubing  
pressure off.

3:10 P. M. Unseat packer. Come out of hole.

4:50 P. M. Come out of hole with tubing and packer.  
Packer appeared to be in new condition.

5:19 P. M. Go in hole with different packer, tightening every joint  
of tubing as we go in the hole.

6:42 P. M. @ 6500' with tubing and packer.  
Set packer.

6:51 P. M. Pressure up to 1000 PSI on back side.

DAKOTA RE-FRAC

7:08 P. M.	Start pad	14 BPM	3500 PSI
		16 BPM	3450 PSI
7:25 P. M.	Start 1/2 lb/gal sand	15 BPM	3500 PSI
7:28 P. M.	1/2 lb/gal sand on formation	15 BPM	3400 PSI
7:37 P. M.	Start 1 lb/gal sand	15 BPM	3400 PSI
7:41 P. M.	1 lb/gal sand on formation	15 BPM	3250 PSI
		15 BPM	3300 PSI
7:46 P. M.		15 BPM	3300 PSI
7:52 P. M.		15 BPM	3350 PSI
7:55 P. M.		15 BPM	3400 PSI
8:04 P. M.		15 BPM	3500 PSI
8:19 P. M.		15 BPM	3500 PSI
8:28 P. M.		15 BPM	3400 PSI
8:45 P. M.		15 BPM	3400 PSI
9:02 P. M.		15 BPM	3400 PSI
9:14 P. M.		15 BPM	3600 PSI
9:16 P. M.		15 BPM	3500 PSI

9:18 P. M.	15 BPM	3600 PSI
9:23 P. M.	15 BPM	3700 PSI
9:30 P. M.	14 BPM	3700 PSI

9:35 P. M. Blender went down  
 ISIP = 1950 PSI  
 Try to flush without blender on line.  
 Got 80,000 lbs. sand in pipe and formation.

9:51 P. M. Blender on line. 8 BPM, 3300 PSI on flush. Shut down.  
 Flush away.

12/10/82:

12:30 A. M. Tubing pressure down to 900 PSI.  
 Open tubing up. Making sand.

2:15 A. M. Well still flowing gas-cut water.  
 Still making sand.

4:00 A. M. Rig broke drive chain while pulling to release packer.

11:00 A. M. Rig is fixed.  
 Worked packer and tubing string between string wt. and  
 40,000 lbs total. Came free from sand pack after 15  
 min. of working it.

1:20 P. M. Came out of hole with tubing and packer.  
 Rig up Western to displace capacity of casing.

1:29 P. M. Start pumping. 3 BPM 1000 PSI

2:56 P. M. Shut down. Casing displaced.

3:11 P. M. Go in hole with EZ drill B. P.

3:44 P. M. Set B. P. @ 7030'.

4:00 P. M. Pressure test plug to 1500 PSI.  
 Held pressure for 2½ min. without any leak off.  
 Bleed pressure off.

4:22 P. M. Perforate Tocito formation @ 6876', 6874', 6872', 6870',  
 6868', 6866', 6864', 6854', 6852', 6849' 6846' - 4 SPF.

4:52 P. M. Perforate Tocito formation @ 6827', 6825', 6821', 6805',  
 6803', 6801', 6783', 6776', 6773', 6767', 6759' - 4 SPF  
 Total 88 holes

TOCITO FRAC:

5:25 P. M. Go in hole with RTTS packer.

6:57 P. M. Set packer @ 6250'.

7:07 P. M. Pressure up on back side to 1000 PSI.

7:15 P. M. Break down. Broke @ 2300 PSI.

Establish rate 3400 PSI @ 9 BPM  
ISIP = 1700 PSI

7:22 P. M.	Start acid with 8 balls/bbl	8 BPM	3000 PSI
	Start water with 8 balls/bbl	8 BPM	3000 PSI
	Start 10 bbl spacer		
	Water with 4 balls/bbl	8 BPM	2700 PSI
7:30 P. M.	Balls on formation	10 BPM	2600 PSI
7:33 P. M.	Second set of balls on formation	10 BPM	3000 PSI
	Balled off @ 3400 PSI		
7:37 P. M.	Surge balls off. Let balls fall to bottom of hole.		
	Wait 20 minutes.		

TOCITO FRAC

7:58 P. M.	Start pad.	13 BPM @ 3450 PSI
8:01 P. M.		14.5 BPM @ 3450 PSI
8:06 P. M.		13.5 BPM @ 3400 PSI
8:07 P. M.		14.0 BPM @ 3500 PSI
8:17 P. M.		13.0 BPM @ 3450 PSI
8:23 P. M.	Start 1/2 lb/gal sand	13.0 BPM @ 3350 PSI
8:26 P. M.	1/2 lb/gal sand on formation	13.0 BPM @ 3300 PSI
8:33 P. M.		13.0 BPM @ 3400 PSI
8:39 P. M.		12.0 BPM @ 3450 PSI
8:41 P. M.		12.5 BPM @ 3600 PSI
8:44 P. M.	on 1/2 lb/gal sand	12.0 BPM @ 3650 PSI
8:45 P. M.		12.5 BPM @ 3700 PSI
8:47 P. M.	Reach 3750 - Slow rate to	10.0 BPM @ 3300 PSI
8:48 P. M.		10.0 BPM @ 3400 PSI
8:49 P. M.		10.0 BPM @ 3450 PSI
8:50 P. M.		10.0 BPM @ 3500 PSI
8:52 P. M.	on 1/2 lb/gal sand	10.0 BPM @ 3550 PSI
8:56 P. M.		10.0 BPM @ 3600 PSI
		3650 PSI
8:57 P. M.	Slow rate to	8.0 BPM @ 3750 PSI (pressure)

8.0 BPM @ 3550 PSI

8:58 P. M. 8.0 BPM @ 3600 PSI

8:59 P. M. Have break. 8 BPM - Pressure broke to 3450 PSI

9:01 P. M. 8.0 BPM @ 3450 PSI

9:04 P. M. 8.0 BPM @ 3450 PSI

9:07 P. M. 8.0 BPM @ 3550 PSI

9:13 P. M. 8.0 BPM @ 3600 PSI  
Slow rate 6 BPM - Pressure went to 3800 PSI

9:15 P. M. Cut sand @ 852 bbls. slurry

9:16 P. M. 5.0 BPM @ 3500 PSI

9:17 P. M. On flush 5.0 BPM @ 3550 PSI  
Shut down  
29 bbls. flush away

9:29 P. M. ISIP = 2100 PSI - 15 min. shut in 2000 PSI  
Total sand: 11,000 lbs.

11:00 P. M. Flow well back through 1/2 inch choke.

12/11/82:

4:30 A. M. Remove 1/2" choke. Have show of oil and gas to surface.  
Unseat RTTS packer.

6:24 A. M. Circulate hole down tubing with 83 bbls. Fr H<sub>2</sub>O  
3.0 BPM @ 650 PSI<sup>2</sup>

7:00 A. M. Come out of hole with tubing and packer.

8:14 A. M. Out of hole with tubing and packer.  
Rig up Bluejet to set retrievable bridge plug.

8:35 A. M. Go in hole with retrievable bridge plug.

9:11 A. M. Set plug @ 6300'.

9:28 A. M. Test plug to 1500 PSI. Held pressure for 5 minutes  
with no bleed off.

9:38 A. M. Go in hole with perforating gun.  
Hit something in hole @ 540'.  
Come out of hole with gun.

9:45 A. M. Go in hole with junk basket. Run to 6250'.

10:13 A. M. Come out of hole with junk basket. Picked up 8 frac  
balls that Western must have pumped in casing while pressure  
testing bridge plug.

10:20 A. M. Go in hole with perforating gun.

10:29 A. M. Perforate Gallup formation @ 6215', 6213', 6208', 6206', 6204', 6200', 6193', 6191', 6189', 6187', 6175'.  
4 SPF - 44 holes

10:44 A. M. Go in hole with perforating gun.

10:56 A. M. Perforate Gallup formation @ 6173', 6171', 6169', 6167', 6165', 6163', 6085', 6081', 6073', 6054', 6052' - 4 SPF - 44 holes

11:25 A. M. Go in hole with RTTS packer and tubing.

12:35 P. M. Set packer @ 5700'.

12:50 P. M. Pressure up to 1000 PSI on casing.

GALLUP FRAC:

12:58 P. M. Break down. Broke @ 1300 PSI and 3200 PSI  
Establish rate 18 BPM @ 3200 PSI  
ISIP = 300 PSI

1:01 P. M. Start acid (7½% Hcl) - 6 bbls. with 6 balls/bbl  
Run 5 bbls. H<sub>2</sub>O with 6 balls/bbl - 6 BPM @ 1000 PSI  
Run 10 bbl H<sub>2</sub>O spacer 6 BPM @ 1000 PSI  
Run 5 bbl H<sub>2</sub>O with 6 balls/bbl 12 BPM @ 1300 PSI  
Total: 96 balls  
Increase rate to 10 BPM @ 2500 PSI  
Have ball action 9 BPM @ 2600 PSI  
Balls hit 2 BPM @ 3700 PSI

1:15 P. M. Surge balls off perforations.  
Wait 20 minutes for balls to fall.

1:38 P. M. Start pad 22 BPM @ 3400 PSI  
24 BPM @ 2900 PSI  
24.5 BPM @ 3200 PSI

1:47 P. M. 25 BPM @ 3200 PSI

1:51 P. M. 310 bbls pad away  
Start 1/2 lb/gal sand 25 BPM @ 3200 PSI

1:53 P. M. 1/2 lb/gal sand on formation 25 BPM @ 3200 PSI  
24 BPM @ 3400 PSI  
24.5 BPM @ 3300 PSI

2:01 P. M. Start 1 lb/gal sand 25 BPM @ 3400 PSI

2:03 P. M. 1 lb/gal sand on formation 25 BPM @ 3300 PSI

2:07 P. M. 25 BPM @ 3400 PSI  
24 BPM @ 3500 PSI

2:16 P. M. 24 BPM @ 3600 PSI

2:20 P. M. 23 BPM @ 3800 PSI

2:21 P. M.	On 1 lb/gal sand	24 BPM @ 3700 PSI
2:25 P. M.		23 BPM @ 3800 PSI
2:28 P. M.	Pump starts leaking-Shut it down. With 1 pump on line, rate falls to	17 BPM @ 2400 PSI
2:42 P. M.		16 BPM @ 2600 PSI 13 BPM @ 2600 PSI
3:00 P. M.	On 1 lb/gal sand	13 BPM @ 2600 PSI
3:06 P. M.		13 BPM @ 3000 PSI
3:21 P. M.	Start 1 1/2 lb/gal sand	13 BPM @ 2700 PSI
3:25 P. M.	1 1/2 lb/gal sand on formation	13 BPM @ 2600 PSI
3:30 P. M.	Pressure went to 4500 PSI. Shut down. ISIP = 200 PSI 10 min shut in - 100 PSI 65,000 lbs sand in 2021 bbls. slurry pumped Shut well in for 1.5 hours. Tubing pressure falls to 50 PSI.	
5:15 P. M.	Flow well back. Have show of oil and gas during flow back.	
8:15 P. M.	Flow slows down enough to pull tubing and packer.	
9:45 P. M.	Go in hole with retrieving head and tubing to retrieve bridge plug @ 6300'. Tag sand @ 6176'. Start to circulate sand out of casing. Circulate down to 6180'. Gallup formation starts flowing H <sub>2</sub> O and sand. Sand covers retrieving head.	

12/12/82:

Tubing is stuck in hole.  
Cut off 150' of tubing.  
Go in hole with wash-over pipe.  
Wash over tubing down to retrieving head. Come out of hole with washover pipe.

12/13/82:

Out of hole with washover pipe. Go in hole with overshot to latch on tubing. Get ahold of tubing. Move it 5-6' up hole. Overshot grip lets go.

12/14/82:

Come out of hole with 24" overshot. Go in hole with 36" overshot.  
Get back on tubing with 36" overshot. Jar stuck tubing 50' up hole. Tubing becomes unstuck. Come out of hole with tubing.

12/15/82:

Retrieve bridge plug @ 6300'. Mill out EZ Drill plug @ 7030'. Clean out to T. D. - 7314'. Land tubing @ 7243'.



**CHACE OIL COMPANY, INC.**

313 Washington S.E.

Albuquerque, New Mexico 87108

(505) 266-5562

January 10, 1983

Mr. John S. Keller  
U. S. Dept of the Interior  
Bureau of Land Management  
P. O Drawer 600  
Farmington, NM 87401

Re: Commingling of Well 15-3, Chacon Dakota Associated Pool

Dear Mr. Keller:

This is to notify the Bureau of Land Management that Chace Oil Company, Inc. has applied under the Oil Conservation Commission rule 303-C for authority to commingle the Gallup, Tocito, Greenhorn, and Dakota production.

The application is submitted for the Chace Oil Company, Inc. 15-3 well in Unit 'F', of Section 20, T23N,R3W, Sandoval County, New Mexico.

Very truly yours,

Ross Easterling  
Landman

RE/ss



*CHACE OIL COMPANY, INC.*

313 Washington S.E.  
Albuquerque, New Mexico 87108  
(505) 266-5562

January 13, 1983

Amoco Production Company  
Amoco Building  
Denver, Colorado 80202

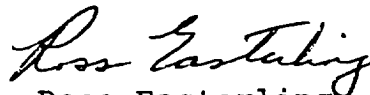
Attention: Laura H. Greeley

Re: Chace Apache 15-3 Well  
Unit 'F' - 1850' FNL & 1850' FWL  
Section 20, T23N,R3W  
Sandoval County, New Mexico

Gentlemen:

By executing this Waiver in the space provided below,  
Amoco Production Company, as offset operator, will  
indicate that they are not adverse to downhole  
commingling of Gallup production with the Chacon  
Dakota in the above referenced well.

Very truly yours,

  
Ross Easterling  
Landman

RE/ss

WAIVER APPROVED

AMOCO PRODUCTION COMPANY



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 7754  
Order No. R-7178

APPLICATION OF CHACE OIL COMPANY,  
INC. FOR DOWNHOLE COMMINGLING,  
SANDOVAL COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on December 16, 1982, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 5th day of January, 1983, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Chace Oil Company, Inc., is the owner and operator of the Chace Apache 15 Well No. 2, located in Unit I of Section 20, Township 23 North, Range 3 West, NMPM, Sandoval County, New Mexico.
- (3) That the applicant seeks authority to commingle Gallup and Dakota production within the wellbore of the above-described well.
- (4) That from the Gallup zone, the subject well is capable of low marginal production only.
- (5) That from the Dakota zone, the subject well is capable of low marginal production only.
- (6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(8) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Aztec district office of the Division any time the subject well is shut-in for 7 consecutive days.

(9) That in order to allocate the commingled production to each of the commingled zones in the wells, applicant should consult with the supervisor of the Aztec district office of the Division and determine an allocation formula for each of the production zones.

IT IS THEREFORE ORDERED:

(1) That the applicant, Chace Oil Company, Inc., is hereby authorized to commingle Gallup and Dakota production within the wellbore of the Chace Apache 15 Well No. 2, located in Unit I of Section 20, Township 23 North, Range 3 West, NMPM, Sandoval County, New Mexico.

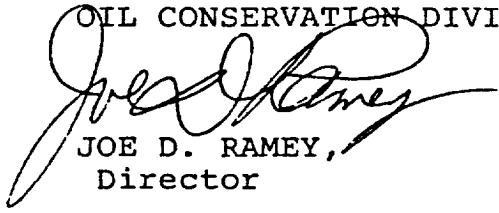
(2) That the applicant shall consult with the Supervisor of the Aztec district office of the Division and determine an allocation formula for the allocation of production to each zone in each of the subject wells.

(3) That the operator of the subject well shall immediately notify the Division's Aztec district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
JOE D. RAMEY,  
Director

S E A L