

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

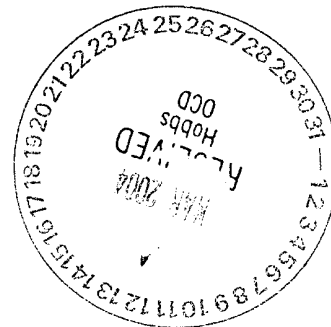
Form C-103  
Revised June 10, 2003

<p><b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (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.)</p> <p>1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/></p>		<p>WELL API NO. 30-025-34171</p>
<p>2. Name of Operator ConocoPhillips Company</p>		<p>5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/></p>
<p>3. Address of Operator 4001 Penbrook Street Odessa, TX 79762</p>		<p>6. State Oil &amp; Gas Lease No.</p>
<p>4. Well Location Unit Letter <u>F</u> : <u>1980</u> feet from the <u>North</u> line and <u>2310</u> feet from the <u>West</u> line Section <u>27</u> Township <u>21S</u> Range <u>37E</u> NMPM County <u>Lea</u></p>		<p>7. Lease Name or Unit Agreement Name Lockhart A-27</p>
<p>11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3410' GR</p>		<p>8. Well Number 15</p>
<p>12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data</p>		<p>9. OGRID Number 217817</p>
<p>NOTICE OF INTENTION TO:</p> <p>PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/></p> <p>TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/></p> <p>PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPLETION <input type="checkbox"/></p> <p>OTHER: Downhole Commingle <input checked="" type="checkbox"/></p>		<p>SUBSEQUENT REPORT OF:</p> <p>REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/></p> <p>COMMENCE DRILLING OPNS. <input type="checkbox"/> PLUG AND ABANDONMENT <input type="checkbox"/></p> <p>CASING TEST AND CEMENT JOB <input type="checkbox"/></p> <p>OTHER: <input type="checkbox"/></p>

13. 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. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

ConocoPhillips Company requests District approval to downhole commingle the Drinkard & Blinebry Pools per Order No. R11363 in the subject well.

Form C-107A, with attachments, is enclosed.



DHC Order No. HOB-0086

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

SIGNATURE Celeste G. Dale TITLE Regulatory Analyst DATE 03/10/2004

Type or print name Celeste G. Dale E-mail address: \_\_\_\_\_ Telephone No. \_\_\_\_\_  
(This space for State use)

APPROVED BY [Signature] TITLE PETROLEUM ENGINEER DATE APR 22 2004  
Conditions of approval, if any: \_\_\_\_\_

**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505

**Oil Conservation Division**  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

APPLICATION TYPE  
☒ Single Well  
☐ Existing Pre-Approved Pools  
 EXISTING WELLBORE  
☒ Yes      ☐ No

## APPLICATION FOR DOWNHOLE COMMINGLING

4001 Penbrook Street Odessa, TX 79762

Address

Lea

County

OGRID No. 217817    Property Code 31405    API No. 30-025-34171    Lease Type:    ☒ Federal    ☐ State    ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Blinebry Oil & Gas (Oil)		Drinkard
Pool Code	6660		19190
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	5514' - 5550'		6350' - 6593'
Method of Production (Flowing or Artificial Lift)	Artificial Lift		Artificial Lift
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	<500psig (Est.)		<500psig (Est.)
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1200 BTU		1200 BTU
Producing, Shut-In or New Zone	Blinebry		Drinkard
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: 12/ /2003  Rates:75mcf, 3BOPD	Date:  Rates:	Date: 06/ /2003  Rates: 104mcf,3BO
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil Gas  50 % 40 %	Oil Gas  % %	Oil Gas  50 % 60 %

Are all working, royalty and overriding royalty interests identical in all commingled zones?  
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail?

Yes   X   No \_\_\_\_\_  
Yes \_\_\_\_\_ No \_\_\_\_\_

Are all produced fluids from all commingled zones compatible with each other?

Yes      X    No

**Will commingling decrease the value of production?**

Yes                      No                      X

If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application?

Yes      **X**      No      \_\_\_\_\_

NMOCD Reference Case No. applicable to this well: \_\_\_\_\_

**Attachments:**

C-102 for each zone to be commingled showing its spacing unit and acreage dedication.  
 Production curve for each zone for at least one year. (If not available, attach explanation.)  
 For zones with no production history, estimated production rates and supporting data.  
 Data to support allocation method or formula.  
 Notification list of working, royalty and overriding royalty interests for uncommon interest cases.  
 Any additional statements, data or documents required to support commingling.

## PRE-APPROVED POOLS

**If application is to establish Pre-Approved Pools, the following additional information will be required:**

List of other orders approving downhole commingling within the proposed Pre-Approved Pools  
List of all operators within the proposed Pre-Approved Pools  
Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.  
Bottomhole pressure data.

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

SIGNATURE William A. Nale TITLE Regulatory Analyst DATE 02/26/04

TYPE OR PRINT NAME Celeste G. Dale TELEPHONE NO. ( ) (432) 368-1667

E-MAIL ADDRESS Celeste.g.dale@conocoPhillips.com

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires November 30, 2000

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
ConocoPhillips Company

3a. Address  
4001 Penbrook Street Odessa TX 79762

3b. Phone No. ( include area code )  
(432)368-1667

4. Location of Well ( Footage, Sec., T., R., M., or Survey Description )  
1980' FNL & 2310' FWL  
Sec. 27, T-21-S, R-37-E

5. Lease Serial No.

LC 032096A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.  
Lockhart A-27 #15

9. API Well No.  
30-025-34171

10. Field and Pool, or Exploratory Area  
Drinkard/Blinebry

11. County or Parish, State  
Lea  
New Mexico

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/ Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>Downhole</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<u>Commingle</u>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

ConocoPhillips Company requests authority to downhole commingle the Drinkard & Blinebry Pools in the subject well.

Copy of NMOCD Form C-107A with attachments enclosed.

DHC Order No. HOB-0086

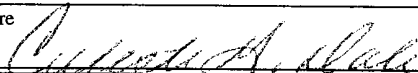
14. I hereby certify that the foregoing is true and correct  
Name ( Printed/Typed )

Celeste G. Dale

Title

Regulatory Analyst

Signature



Date

02/26/2004

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

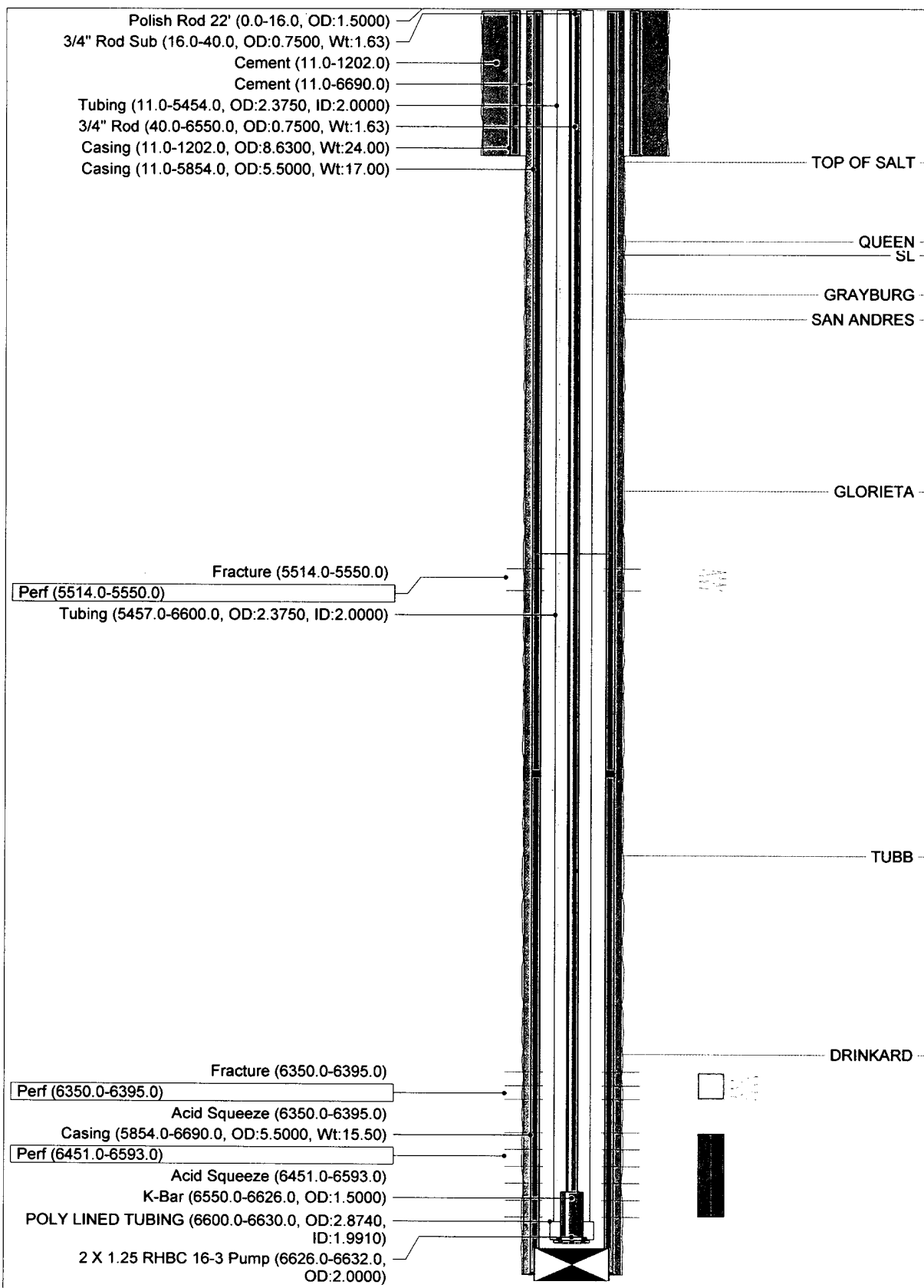
Office

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

( Instructions on reverse )

ConocoPhillips Company  
Downhole Commingle Permit  
Drinkard & Blinebry  
Lockhart A-27 No. 15

- The Lockhart A-27 No. 15 well was originally completed as a Drinkard producer in March 1998. Attached are the reported volumes from the Drinkard from 1998 through July 2003 in addition to a production decline curve showing the predicted natural decline.
- In July 2003 a RPB was set above the Drinkard zone and the Blinebry was perforated and fractured stimulated. All the production from the well since July 2003 through current is from the Blinebry.
- From the attached decline curve and the well test data both zones produce the approximate same oil volume 3 BOPD. The gas volume in the Blinebry zone is 80 MCFGPD as compared to the last test in the Drinkard at 100 MCFGPD. Therefore allocation from each zone after commingling should be 50% for oil production and 40% for gas from the Blinebry and 60% for gas from the Drinkard.
- The RPB as shown in the attached wellbore sketch will be pulled as soon as the downhole commingle permit is approved. After pulling the RPB the downhole pump will be lowered to below the bottom perforation in the Drinkard to allow efficient depletion of both zones.



30025341710000

2/20/2004

**LOCKHART A-27 #15 (JG 07/21/2003)**

API No.	30025341710000
Spud	2/16/1998
Completion	3/24/1998
Abandoned	
Frm. Prod.	Drinkard
Well No.	15
Field	Lockhart
Init. Well Class.	
Status	
Permit	
RR	
Last Act.	
TD	6690.0 ftKB
PBTD	6645.0 ftKB
Operator	CONOCO
Permit No.	
District	Hobbs O.U.
Final Well Class.	
Frm. at TD	Drinkard

**Elevations**

KB-Grd	11.0 ft
Grd	3410.0 ft
Tub Head	0.0 ft
KB	3421.0 ft
Cas Flng	0.0 ft

**Bore Hole Data**

Size (in)	Depth (ftKB)
12.2500	1202.0
6.5000	6690.0

**Casing String - Surface Casing**

Grd	Item (in)	Btm (ftKB)	Comments	ID	Thd	Jnts	Wt
M-50	8.6300 in Casing	1202.0		8.1000	8rd STC	29	24.00

**Casing String - Production Casing**

Grd	Item (in)	Btm (ftKB)	Comments	ID	Thd	Jnts	Wt
K-55	5.5000 in Casing	5854.0		4.8900	8rd LTC	141	17.00
K-55	5.5000 in Casing	6690.0		4.9500	8rd LTC	20	15.50

**Casing Cement**

Amount (sx)	Comments	Casing String	Top (ftKB)
545		Surface Casing	11.0
1315	Cmt circ	Production Casing	11.0

**Perforations**

Int	Shots (/ft)	Comments	Type	Date
6451.0 - 6593.0	3.3	@ 6451-58, 6472-76, 6482-86, 6497, 6503, 6524, 6530-34, 6539-42, 6548-53, 6560-64, 6569-73, 6588-93 in 700 G 15% NEFE HCL.	Jet perforation	3/11/1998
6350.0 - 6395.0	3.3	@ 6350-62, 6390-95'	Jet perforation	5/4/1998
5514.0 - 5550.0	4.0	@5514-5550'	Jet perforation	7/23/2003

**Stimulations & Treatments**

Int	Zone	Comments	Type	Date	Fluid
6451.0 - 6593.0	Drinkard	RIH w/PPI tool, BD Drinkard perms w/1,200 G 15% NEFE HCL. Acdz w/5,800 G 15% NEFE HCL & 400 BS. AIP=2,850#. Fair BA. ISIP=950#, Vacuum in 3 min.	Acid Squeeze	3/12/1998	15% NEFE HCL
6350.0 - 6395.0	UPPER DRINKARD	1500 GAL. 15% & 30 1.3BS. BDP-3400. BALLED OUT TO 5000PSI. ISIP-1380	Acid Squeeze	5/4/1998	15% NEFE HCL
6350.0 - 6395.0	UPPER DRINKARD	2000 GAL AQUA FRAC 3500, 8000 GAL. SPECTRA-G-3500, 16,600# 16/20 NAPLITE (CERAMIC) PROPPANT. MAXIMUM CONCENTRATION 6#/GAL. TREATMENT SCREENED OUT W/ 30 BBL FLUSH REMAINING.	Fracture	5/5/1998	SPECTRA-G

30025341710000

2/20/2004

Stimulations & Treatments (con't)					
Int	Zone	Comments	Type	Date	Fluid
5514.0 - 5550.0	BLINEBRY	FRAC WELL WITH 54000 GAL YF-140ST, 5428 GAL OF WF-110, 6000 LBS 100 MESH SAND, 49000 LBS 16/30 JORDAN SAND, 51000 LBS 16/30 CR4000 RESIN SAND.	Fracture	7/30/2003	SCHLUMBE

**Tubing String - Primary Tubing**

Grd	Item (in)	Comments	ID (in)	Thd	Jnts	Len (ft)	Top (ftKB)	Wt
J-55	2.3750 in Tubing		2.0000	8RD	172	5443.0	11.0	4.70
	5.0000 in Tubing Anchor		2.4000		1	3.0	5454.0	0.00
J-55	2.3750 in Tubing		2.0000	8RD	3	95.0	5457.0	4.70
J-55	2.8740 in POLY LINED TUBING		1.9910	8RD	1	31.0	5552.0	6.40
	2.3750 in Seating Nipple		1.7800		1	1.0	5583.0	0.00
	2.3750 in SOPMA 2'		2.0000		1	5.0	5584.0	4.70

**Rod String - 3/4" Rod String**

Type	Comments	Size (in)	No.	Len (ft)	Top (ftKB)
Dip Tube		1.0000	1	0.0	0.0
Polish Rod 22'		1.5000	1	16.0	0.0
3/4" Rod Sub	Norris D's, 2', 2', 2', 4', 6', 8'	0.7500	6	24.0	16.0
3/4" Rod	Norris D's	0.7500	219	5475.0	40.0
K-Bar	2' CENTRILIZER BETWEEN K-BARS.	1.5000	3	52.0	5515.0
2 X 1.25 RHBC 16-3 Pump		2.0000	1	16.0	5567.0

**Completions & Workovers**

Reason for Workover	Reason for Failure	Date	Summary
Complete Upper Drinkard	Add Perforations	5/1/1998	Complete Upper Drinkard -
Stuck Pump	Sand	5/20/1998	Stuck Pump - POH w/rods & pump, TFF @ 6620', CO w/sand pump to 6640'. RIH w/pump, SN @ 6614', 2' SOPMA @ 6616'. Next morning found well not pumping, TFF @ 6622', CO to 6640' w/sand pump. Moved SN up hole to 6415', LD the 2' SOPMA & RIH w/2" x 29' SOPMA @ 6434'.

Completions & Workovers (con't)			
Reason for Workover	Reason for Failure	Date	Summary
RECOMPLETE/ ADD BLINEBRY PERFS	Re-completion	7/17/2003	<p>RECOMPLETE/ ADD BLINEBRY PERFS - MIRU PULLING UNIT. UNSEAT PUMP, PUMP STUCK. BACKED OFF RODS, COOH WITH RODS, CAME OUT OF HOLE WITH RODS, K-BARS, LEFT PUMP ON BOTTOM. MIRU PUMP TRUCK, KILL WELL. NU BOP, RIH TFF. COOH WITH TUBING. PU RIH w/ bit and Scraper to 6624, Hot oil tubing, scanned tubing out of hole, found 199 yellow jts and 1 Blue jt.. PU RIH w/ RBP on tubing, set RBP @ 5700. Load hole, test plug to 2000#, Held OK, Dump 200# of 20/40 sand on RBP, Spot 300 gal. 15% HCL @ 5550', Flushed w/20 bbls treated 9# brine, POOH w/ tubing. MIRU SCHLUMBERGER, HELD PJSM. RIH WITH 4" HEGS CASING GUNS USING SECURE DETONATORS LOADED 4 JSPF. PRESSURE TEST LUBRICATOR TO 1500 PSI, OK. RIH AND PERFORATE BLINEBRY ZONE 5514'-5550'. MADE 2 RUNS. RD SCHLUMBERGER. RIH WITH 5.5 MX-1 TREATING PKR ON 170 JTS TUBING. SET PKR AT 5395'. LOAD AND TEST CSG TO 2000 PSI, OK. MIRU SCHLUMBERGER. TEST LINES, HELD PJSM. BREAK DN BLINEBRY PERFS. PUMPED 16 BBLS TO CATCH PSI, PUMPED TOTAL 36 BBLS 2% KCL BEFORE PERFS BROKE BACK, PERFS BROKE BACK AT 4375 PSI. STARTED ACID, PUMPED 5 BBLS 15% ACID, THEN STARTED DROPPING 5 BALL SEALERS EVERY BBL PUMPED. DROPPED 200 BALL SEALERS, PUMPED 60 BBLS 15 % ACID, WITH 26 BBLS 2% KCL FLUSH. SHUT DN, ISIP 1123 PSI, 0 PSI IN 2 MIN. AVERAGE RATE 4.2 BPM, AVERAGE TREATING PSI 2585 PSI, TOTAL BBLS PUMPED 113 BBLS. HAD GOOD BALL ACTION, BUT DID NOT BALL OUT. RD SHLUMBERGER. START SWABBING. SWABBED 16 BBLS BACK. OPEN WELL, 20 PSI, BLED WELL DN INTO FRAC TANK. RIH AND START SWABBING, FIRST RUN FLUID LEVEL AT 5000' FROM SURFACE. MADE 3 MORE SWAB RUNS, FLUID LEVEL NO CHANGE. RELEASE PKR, LET EQUALIZE, RIH WITH 5 JTS TO KNOCK BALLS OFF PERFORATIONS. PU AND RESET PKR. START SWABBING, FLUID LEVEL AT 4800' FROM SURFACE. SWABBED DN WITH 3 RUNS, HAD 100' OF FLUID ENTRY EVERY HOUR. SWABBED BACK TOTAL OF 6-7 BBLS ALL WATER. LOAD TO RECOVER TOTAL 212 BBLS, RECOVERED 22-23 BBLS TO DATE. SWABBING ON WELL. FIRST SWAB RUN NO FLUID LEVEL. MADE SWAB RUN EVERY HOUR, FLUID LEVEL 5300'. DID NOT RECOVER ENOUGH FLUID TO RECORD. RELEASE PKR, LET EQUALIZE, COOH WITH TUBING AND PKR. ND BOP, NU FRAC VALVE, TEST FRAC VALVE TO 5000 PSI, OK. Well Press 50 PSI, RU Schlumberger and Frac Blinebry formation w/106000# 16/30 Ottawa Sand down casing, Avg Rate = 35 BPM, Avg Press = 3106#, ISIP = 2060#, 5 min = 1979#, 10 min = 1918#, 15 min = 1873#, Total load 1471 bbls. Flushed to top perf.. RDMO Schlumberger. Well was on vacuum, RD frac valve, RU BOP, Hole standing full of fluid, RIH w/ 4 3/4" Bit on 2 3/8" tubing, tagged sand @ 5516 (perfs 5514 - 5550), POOH w/ tubing, PU RIH w/ bailer with bit on bottom. Worked bit and bailer. Did Not make any hole, ordered out Power swivel. , PU power swivel, Lower tubing and tagged fill @ 5516' cleaned out fill to 5697' (RBP @5700'), POOH w/ bit, bailer and 2 3/8" tubing, RIH w/ 2 3/8" - 5' SOPMA, 2 3/8" SN, 1 - 2 7/8 " polylined Jts and 3 Jts 2 3/8" tubing, 5 1/2" TAC and 172 Jts 2 3/8" tubing. RD BOP. RIH WITH RODS AND PUMP. LOAD AND TEST, 500 PSI, OK. RIG DN PULLING UNIT.</p>



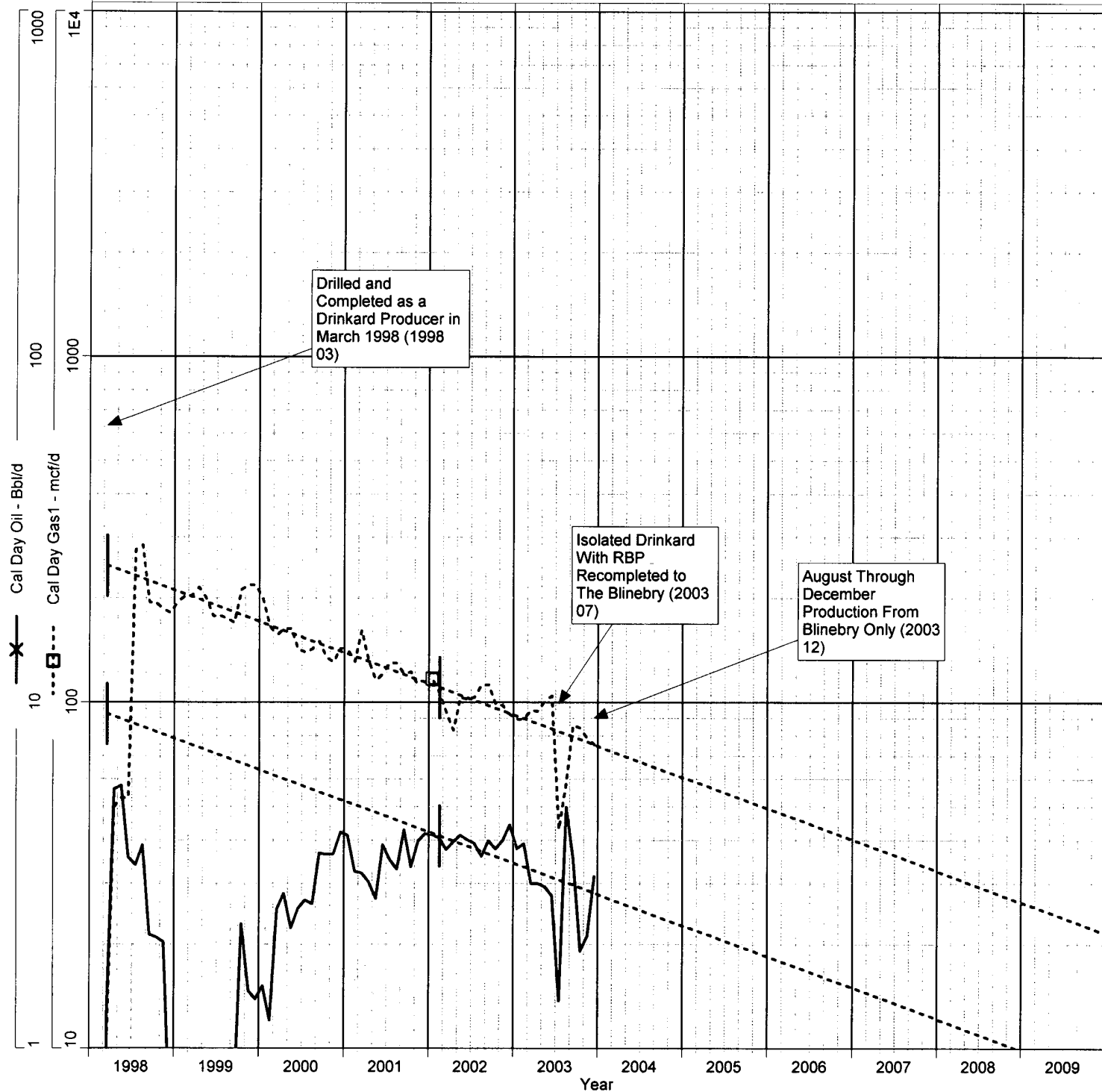
Facility		Compl.	Lease	Well	Pool	Day	31		Oil	Water	Gas	Days NOT	DOWN HOLE COMMINGLED	Fid. Level		Downtime			Compl.			
ID	Lease	ID	Code	No.	Code	Mo.	Day	Yr.	Test	Test	Test	Produced	OIL	WTR	GAS	FAP	Status	oil	gas	Comments	Facility ID	ID
1870020	LOCKHART A-27	1894174	6812945	15	GMV - CXB	08	24	03	6	2	73	6				90'	OPU	5	59		1870020	1894174
1870020	LOCKHART A-27	1894174	6812945	15	GMV - CXB	09	22	03	4	2	92	3				90'	OPU	4	83		1870020	1894174
1870020	LOCKHART A-27	1894174	6812945	15	GMV - CXB	10	21	03	2	2	82	0				90'	OPU	2	82		1870020	1894174
1870020	LOCKHART A-27	1894174	6812945	15	GMV - CXB	11	03	03	2	2	75	0				90'	OPU	2	75		1870020	1894174
1870020	LOCKHART A-27	1894174	6812945	15	GMV - CXB	12	03	03	3	2	73	0				90'	OPU	3	73		1870020	1894174

Recompleted well in Blinebry (with Drinkard below RPB). Moved rig off location, July, 31, 2003. Will be moving rig back on well to pull RPB and commingle this year. Contact Mike O'Connor for specific scheduling.

GMV = Drinkard Pool

CXB = Blinebry Oil & Gas Pool

# LOCKHART A 27 - 15\_GMV (1894174) Data: Jan.1995-Dec.2003



# MORNING REPORT

WELL NAME & NUMBER				FORMATION	
LOCKHART A-27 NO. 15				Blinebry	
Date	OIL	WTR	GAS	Cp	FLP
8/12/03	0	17	0	35	35
8/13/03	0	6	18	35	35
8/14/03	1	7	27	35	35
8/15/03	3	6	44	35	35
8/19/03	3	5	67	35	35
8/20/03	4	6	77	35	35
8/21/03	6	3	78	35	35
8/22/03	4	1	77	35	35
8/23/03	6	1	74	35	35
8/24/03	6	2	77	35	35
8/25/03	6	2	79	35	35
8/26/03	4	2	81	35	35
8/27/03	6	2	75	35	35
8/28/03	7	2	87	35	35
8/29/03	6	1	91	35	35
9/2/03	8	2	90	35	35
9/3/03	5	1	99	28	28
9/4/03	5	1	100	30	30
9/5/03	5	1	72	35	35
9/8/03	0	1	51	35	35
9/9/03	3	1	55	35	35
9/10/03	6	2	65	35	35
9/11/03	3	1	72	35	35
9/12/03	5	2	82	35	35
9/15/03	5	3	92	35	35
9/16/03	4	2	92	35	35
9/17/02	4	2	93	35	35
9/18/03	4	2	92	35	35
9/19/03	4	2	94	35	35
9/22/02	4	2	93	35	35
9/23/03	3	2	94	35	35
9/24/03	3	2	93	35	35
9/25/03	3	2	93	35	35
9/26/03	3	2	93	35	35
9/29/03	3	2	92	35	35
9/30/03	3	2	91	35	35
10/1/03	3	2	91	35	35

# Well: LOCKHART A 27 - 15\_GMV

## Well Time Graph Report

Date	WI Cal	WI	2003	2003
	Day Oil	Cal Day	POCO	POCO
		Gas1	Oil	Gas
	Bbl/d	mcf/d	Bbl/d	mcf/d
1998 01	0.00	0.00	---	---
1998 02	0.00	0.00	---	---
1998 03	1.23	10.13	9.25	248.40
1998 04	5.60	49.80	9.09	244.14
1998 05	5.74	52.90	8.94	239.94
1998 06	3.57	53.13	8.78	235.82
1998 07	3.39	275.68	8.63	231.77
1998 08	3.87	284.68	8.48	227.72
1998 09	2.13	194.13	8.34	223.81
1998 10	2.10	192.90	8.19	219.96
1998 11	2.03	185.27	8.05	216.18
1998 12	0.61	180.94	7.92	212.47
1999 01	1.00	195.00	7.78	208.76
1999 02	0.82	202.71	7.65	205.29
1999 03	0.90	203.19	7.52	201.88
1999 04	0.80	215.00	7.39	198.41
1999 05	0.81	200.26	7.27	195.00
1999 06	0.77	177.47	7.14	191.65
1999 07	0.68	177.29	7.02	188.35
1999 08	0.68	174.42	6.90	185.07
1999 09	0.67	169.53	6.78	181.89
1999 10	2.29	211.45	6.66	178.76
1999 11	1.47	218.23	6.55	175.69
1999 12	1.39	217.45	6.44	172.67
2000 01	1.52	200.13	6.31	169.20
2000 02	1.21	165.72	6.20	166.34
2000 03	2.52	156.26	6.10	163.54
2000 04	2.80	163.40	5.99	160.74
2000 05	2.23	163.42	5.89	157.98
2000 06	2.53	142.10	5.79	155.28
2000 07	2.68	139.35	5.69	152.62
2000 08	2.61	142.39	5.59	149.96
2000 09	3.67	149.93	5.49	147.39
2000 10	3.63	134.58	5.40	144.86
2000 11	3.64	130.47	5.31	142.38
2000 12	4.22	142.90	5.22	139.94
2001 01	4.12	141.77	5.14	137.88
2001 02	3.24	131.07	5.06	135.59
2001 03	3.21	161.13	4.97	133.33
2001 04	3.03	131.77	4.89	131.04
2001 05	2.71	115.45	4.80	128.79
2001 06	3.87	120.77	4.72	126.58
2001 07	3.50	130.00	4.64	124.40
2001 08	3.29	129.35	4.56	122.23
2001 09	4.28	120.83	4.48	120.13
2001 10	3.34	122.29	4.40	118.07
2001 11	3.97	111.60	4.33	116.04
2001 12	4.17	---	4.25	114.04
2002 01	4.14	116.94	4.18	112.05
2002 02	4.05	106.50	4.11	110.19
2002 03	3.75	93.58	4.04	108.36
2002 04	3.95	83.00	3.97	106.50

# Well: LOCKHART A 27 - 15\_GMV

## Well Time Graph Report

Date	WI Cal	WI	2003	2003
	Day Oil	Cal Day	POCO	POCO
		Gas1	Oil	Gas
	Bbl/d	mcf/d	Bbl/d	mcf/d
2002 05	4.13	103.19	3.90	104.67
2002 06	4.00	102.07	3.84	102.87
2002 07	3.91	103.32	3.77	101.10
2002 08	3.59	111.94	3.71	99.33
2002 09	3.98	112.27	3.64	97.63
2002 10	3.77	98.74	3.58	95.95
2002 11	3.99	97.80	3.52	94.30
2002 12	4.42	92.06	3.46	92.68
2003 01	3.77	89.23	3.40	91.06
2003 02	3.90	89.36	3.34	89.55
2003 03	3.00	94.77	3.29	88.06
2003 04	2.99	94.17	3.23	86.55
2003 05	2.93	100.97	3.17	85.06
2003 06	2.76	104.33	3.12	83.60
2003 07	1.37	43.00	3.07	82.16
2003 08	4.98	58.29	3.01	80.73
2003 09	3.55	85.63	2.96	79.34
2003 10	1.91	84.19	2.91	77.98
2003 11	2.10	78.73	2.86	76.64
2003 12	3.14	75.35	2.81	75.32
2004 01	---	---	2.76	73.81
2004 02	---	---	2.71	72.56
2004 03	---	---	2.66	71.34
2004 04	---	---	2.62	70.12
2004 05	---	---	2.57	68.91
2004 06	---	---	2.53	67.73
2004 07	---	---	2.49	66.57
2004 08	---	---	2.44	65.41
2004 09	---	---	2.40	64.29
2004 10	---	---	2.36	63.19
2004 11	---	---	2.32	62.11
2004 12	---	---	2.28	61.04
2005 01	---	---	2.25	60.14
2005 02	---	---	2.21	59.14
2005 03	---	---	2.17	58.16
2005 04	---	---	2.13	57.16
2005 05	---	---	2.10	56.18
2005 06	---	---	2.06	55.21
2005 07	---	---	2.03	54.27
2005 08	---	---	1.99	53.32
2005 09	---	---	1.96	52.40
2005 10	---	---	1.92	51.50
2005 11	---	---	1.89	50.62
2005 12	---	---	1.86	49.75
2006 01	---	---	1.83	48.88
2006 02	---	---	1.80	48.07
2006 03	---	---	1.77	47.27
2006 04	---	---	1.74	46.45
2006 05	---	---	1.71	45.66
2006 06	---	---	1.68	44.87
2006 07	---	---	1.65	44.10
2006 08	---	---	1.62	43.33

ISOLATED DRINKING ZONE IN Aug 2003  
 PRODUCTION FROM AUGUST THROUGH DEC 2003  
 IS FROM BLUEBAY ONLY.



WELL NAME & NUMBER: LOCKHART A-27 NO. 15	DATE:
LOCATION: 1980' FNL, 2310' FWL SEC 27, T21S, R37E	PBTD: 6640
ELEVATION: 3410	KB / AGL: 3421

WELL HEAD  
MFG:  
TYPE:  
SIZE:

SURFACE CASING:  
SIZE 8.625  
WEIGHT 23  
QUANTITY' 1207  
TOP OF CEMENT SURFACE

PRODUCTION CASING: →  
SIZE 5.5  
WEIGHT 17  
QUANTITY' 6690  
TOP OF CEMENT SURFACE

TUBING:	QUANTITY'	SIZE	JOINTS	WEIGHT	GRADE	OTHER
	6391	2.375	202	4.7	J-55	

TBG SUBS:	QUANTITY'	JOINTS
	6391	202

RODS:	SIZE	GRADE	ROD COUNT	NONE GUIDED RODS	POLISHED ROD
K-BARS:	1.5		3		OD" 1 1/2
SUBS:	3/4	D	5		LENGTH' 22
SUBS:	5/8				TYPE
	3/4	D	251		LINER
	7/8				
	1				

PACKER or TAC@  
6278 →

TOTALS:	259
QUANTITY':	6372

PUMP @	TUBING	PUMP BORE	TYPE	BARREL LENGTH	PLUNGER LENGTH	EXTENSION LENGTH
6415	20	125	RHBC	16	3	

SN @  
6415

GAS ANCHOR: OD" LENGTH'

MUD ANCHOR: OD" LENGTH'  
2.375 29

FORMATION	DRINKARD
DRINKARD	6350 6593

PBTD 6640  
TD 6690

273 PSI, CALCULATED BOTTOM HOLE PRESSURE

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

## OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised June 10, 2003

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☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-025-34171		<sup>2</sup> Pool Code 6660	<sup>3</sup> Pool Name Blinebry Oil & Gas (Oil)
<sup>4</sup> Property Code	<sup>5</sup> Property Name Lockhart A-27		<sup>6</sup> Well Number 15
<sup>7</sup> OGRID No. 217817	<sup>8</sup> Operator Name ConocoPhillips Company		<sup>9</sup> Elevation 3410'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	27	21S	37E		1980	North	2310	West	Lea

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.					

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<div style="text-align: center;"> </div>	<sup>17</sup> <b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature Celeste G. Dale Printed Name Regulatory Analyst Title and E-mail Address 02/26/2004 Date
	<sup>18</sup> <b>SURVEYOR CERTIFICATION</b> I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.
	Date of Survey Signature and Seal of Professional Surveyor:
	Certificate Number

## District I

1625 N. French Dr., Hobbs, NM 88240

## District II

1301 W. Grand Avenue, Artesia, NM 88210

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Revised June 10, 2003

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☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-025-34171		2 Pool Code 19190		3 Pool Name Drinkard	
4 Property Code 31405		5 Property Name Lockhart A-27			6 Well Number 15
7 OGRID No. 217817		8 Operator Name ConocoPhillips Company			9 Elevation 3410'

## 10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	27	21S	37E		1980	North	2310	West	Lea

## 11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

12 Dedicated Acres 40	13 Joint or Infill	14 Consolidation Code	15 Order No.
--------------------------	--------------------	-----------------------	--------------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<div style="text-align: center;"> <p>16</p> <p>2310'</p> <p>1980'</p> <p>#15</p> </div>	<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Celeste G. Dale</i></p> <p>Signature</p> <p>Celeste G. Dale</p> <p>Printed Name</p> <p>Regulatory Analyst</p> <p>Title and E-mail Address</p> <p>02/26/2004</p> <p>Date</p>
	<p>18 SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>06/30/97</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p>
	<p>8278</p> <p>Certificate Number</p>



**Lockhart A-27 No. 15**  
**Blinebry Gas Recompletion & Downhole Commingle Procedure**  
**June 3, 2003**

**WELL INFORMATION:**

**(Refer to Wellview or the Attached Prepull Form for Schematic)**

AFE #: 51-61-1423  
AFE Approval \$115,000 Gross \$58,000 Net  
Interest 50% WI

API Number: 30025-34171  
Location: 1980' FNL & 2310' FWL of Sec. 27, T21S, R37E, Lea County, NM  
Zone/Pool: Blinebry Oil & Gas Pool (NSL Order 4841 – Granted Feb 14, 2003)  
Drinkard:

Battery Destination: -----  
TD: 6,690'  
PBTD: 6,645' (Float collar-Last cleaned out to 6640' in May 1998)  
TOC: Assumed to be at the surface. 32 Skts of cement were circulated during the cement job. No CBL was run following the cement job.

KBE: 3,421'  
GLE: 3,410'  
KBM: 11'

Status: Currently producing 100 MCFGPD with 1 – 2 BWPD on beam pump. Last pull date was May 1998. Pump was full of frac sand with 20' of sand fill.

Well Control: Expected Category 2 Type Well Following Blinebry Recompletion. Use Dynamic Head Kill Procedure to kill the well and maintain hydrostatic head while installing & removing BOP equipment and pulling tubing.

**Casing Specifications:**

Pipe	Depth (ft)	Drift ID (inches)	Collapse (psi)	Burst (psi)	Capacity (bbl/ft)
8-5/8", 23#, M-50	1207	-	-	-	-
5-1/2", 17#, K-55 (Top Section)	0 to 5854	4.653	4910	5320	0.0232
5 1/2", 15.5 #, K-55 (Bottom Section)	5854 to 6690	4.825	4040	4810	0.0238

**Tubing Specifications:**

Pipe	Depth (ft)	Drift ID (in)	Collapse (psi)	Burst (psi)	Capacity (bbl/ft)
2-3/8", 4.7#, J-55	----	1.901	8100	7700	0.00398

### COMPLETION & WELL TESTING PHILOSOPHY:

In March 1998 the Lockhart A-27 No. 15 well was drilled and completed in lower and upper Drinkard intervals from 6350' to 6593' OA. The well was placed on pump producing 200 MCFGPD and 5 BOPD and 5 BWPD. Currently the well is producing 100 MCFGPD with 3 BOPD and 3 BWPD.

The intent of this procedure is to clean out any frac sand fill to PBTD then isolate the Drinkard zone via a RBP, perforate the Blinebry gas zone from 5514' to 5550', break down the perforations with acid and ball sealers and swab test.

- If the Blinebry zone produces in excess of 200 MCFGPD after the breakdown the well will be placed on production as a Blinebry producer without any additional stimulation until the downhole commingle permit is approved. Following approval the RBP will be pulled and the Blinebry will be commingled with the Drinkard.
- If it produces less than 200 MCFGPD the Blinebry zone will be sand fracture stimulated then placed back on production as a Blinebry producer until the downhole commingle permit is approved. Following approval the RBP will be pulled and the Blinebry will be commingled with the Drinkard.

The Lockhart A-27 No. 16 well approximately 1300' northeast of the proposed No. 15 recompletion was recompleted to the same Blinebry gas zone in May 1998. The No. 16 well is currently producing 190 MCFGPD with 0 BOPD and 1 –2 BWPD. It is expected that the reservoir pressure in the No. 15 well will be similar to the No. 16 well estimated at 100 to 500 PSIG.

### ESTIMATED RESERVOIR INFORMATION:

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**Drinkard Wellbore Fluids:** Gas (H2S Content at the battery 2000 ppm)

**Existing Drinkard Pressure:**

<b>Existing Drinkard Perfs:</b>	<b><u>Interval</u></b>	<b><u>NEP (ft)</u></b>	<b><u>Shots</u></b>
<b>Upper Drinkard</b>	6350'- 62'	12'	13
	6390'- 95'	5'	6
<b>Lower Drinkard</b>	6451'- 58'	7'	29
	6472'- 76'	4'	17
	6482'- 86'	4'	17
	6497'	1'	5
	6503'	1'	5
	6524'	1'	5
	6530'- 34'	4'	21
	6539'- 42'	3'	13
	6548'- 53'	5'	21
	6560'- 64'	4'	17
	6569'- 73'	4'	17
	6588'- 93'	<u>5'</u>	<u>21</u>
	<b>Total</b>	<b>60'</b>	<b>207</b>

---

**Blinebry Wellbore Fluids:** Gas (H<sub>2</sub>S Content 100 ppm—wellhead test from No. 16)  
**Blinebry Reservoir Pressure:** Original reservoir pressure is expected to be depleted from the normal pore pressure of 2,400 PSIG. The No. 16 well was recompleted to the same gas zone in April 1998. The last recorded 24 hr shut-in casing pressure on the No. 16 well was 100 PSIG.

<b>Proposed Blinebry Perfs:</b>	<b><u>Interval</u></b>	<b><u>NEP (ft)</u></b>	<b><u>Shots (@ 4SPF)</u></b>
<b>Blinebry</b>	5514' – 5550'	36'	145

**Blinebry Pool Allowable:** --- BOPD and --- MCFD  
**Expected H<sub>2</sub>O prod:** No water is expected from the Blinebry

---

**Drinkard / Blinebry Commingled Artificial Lift Specs**

(See attached prepull package for existing and proposed beam pump design)

**Specs:** Lufkin C228 – 213 – 86

**Source:** Currently in operation.

**Electrical:** The unit currently has a 20 hp motor, no changes will be required.

**Pump Off:** Yes

---

**RECOMMENDED PROCEDURE AND NOTES**

Notes:

1. All depths in this procedure are referenced from KB unless noted otherwise.
2. Please give service companies 48 hours advance notice prior to performing work on the well.
3. Hold prejob safety meetings prior to beginning any new work. For all safety considerations follow guidelines as provided in the attached Pre-Job Safety Assessment sheet.

Kill Fluids:

- 9.0 ppg brine with Champion CI

Frac Fluids/Breakdown Fluids:

- As per Schlumberger Services specs/procedure

---

**Blinebry Recompletion Procedure**

1. Prepare location for work. Test deadmen anchors.
2. Install modified test tank and flow manifold at the wellsite. Install temporary test separator with gas meter at the battery.
3. RU workover rig. RU pump truck to the casing. Pump 50 bbls of treated brine water to kill the Drinkard. Unseat the pump and TOOH with 6275' (251 rods) of 3/4" Class D rods. Visually inspect rods for wear, pitting, paraffin and/or scale. Lay down any pitted or worn rods. Send the pump for teardown and rebuild. See prepull for revised pump design.
4. Use the dynamic head kill procedure to insure the well remains dead while installing or removing the BOP stack and during pulling operations. This well qualifies as a Category 2 well if total gas production exceeds 100 MCFGPD. ND the production tree and install the 5,000 PSIG WP BOP stack and test to 5,000 PSIG according to SOP's.
5. RU wellhead scanning truck. Release the TAC at 6278' and drop down approximately 250' to tag PBTD at 6640'. TOOH with 6391' (202 joints) of 2 3/8" J-55 tubing. Lay down any green or red band tubing. Review results of the tubing scan with Champion and engineering staff to determine if CI treatment needs to be changed.
6. If sand fill is encountered PU bailer and attempt to clean out fill to PBTD at 6640'. TOOH with tubing and bailer.
7. PU 5 1/2" RBP and TIH to set at approximately 5700' (150' below the proposed bottom perforation in the Blinebry zone). PU a couple of feet, load the hole and pressure test the RBP to 2,000 PSIG. Release the pressure and PU 2 joints and spot 2 sks of sand on the RBP. PU to place the end of the tubing at 5550' and spot 300 gals of 15% HCL across proposed Blinebry perforations. TOOH with tubing.
8. RU Schlumberger electric line company. PU 4" HEGS casing guns using **secure detonators** loaded 4 JSPF , 120 degree phasing (hole diameter: 0.4", penetration: 20") with correlation CCL and full lubricator with packoff. Load and pressure test lubricator to 2,000 PSIG. RIH to perforate the Blinebry gas zone (**from the top down**) through the following interval: **Correlation will be made using the Wedge cased hole GR/CCL dated 03/98.**

**Safety Note: All 2-way radios and phones are to be turned off while perforating for a distance of 500'. Warning signs are to be posted on all incoming roads.**

	<u>Interval</u>	<u>NEP (ft)</u>	<u>Shots (@ 4SPF)</u>
<b>Blinebry</b>	5514' – 5550'	36'	145

RD Schlumberger wireline services.

9. TIH with 5 1/2" MX-1 treating packer, or equivalent to 5400' (approximately 100' above the top perforation) and reverse out any excess acid in the casing (approximately 30 bbls, tubing volume plus 8 bbls). Set the packer and load the backside.

10. RU Schlumberger pumping services to breakdown the Blinebry as per the attached Schlumberger Acid Breakdown Recommendation. Lay treating lines with nitrogen activated relief valve and remote actuated ball injector. Pressure test the packer and backside to 2,000 PSIG then relieve the backside pressure and leave the casing valve open during the remainder of the treatment. Verify preset relief valve setting to relieve pressure at 4,500 PSIG.

- Load the tubing and breakdown the perforations with 20 bbls of 2% KCL water.
- After breakdown, pump 2,500 gals of 15% NEFE at 5 BPM dropping 200, 1.3 sg, 7/8 RCN ball sealers throughout the treatment.
- At ballout, surge the balls off the perforations and over displace acid through the perforations by 2 bbls.
- Monitor pressure bleed off at 5, 10 and 15 minutes.
- Bleed off surface pressure and disconnect Schlumberger from the tubing and then RD and release Schlumberger services.

<b>TREATING LINE TEST PRESSURE: A minimum 1000 psig over MATP</b>	<b>6000</b>	<b>PSIG</b>
<b>MAXIMUM ALLOWABLE WORKING PRESSURE: Based on weakest component in system. Burst Pressure of 5 ½ Casing.</b>	<b>4810</b>	<b>PSIG</b>
<b>NITROGEN POP OFF SET PRESSURE: Relief pressure set at the lesser of :</b>  300 psig less than 90% MAWP or, (Exception: 4500 PSIG equals 90% of MAWP)  300 psig over MATP	<b>4500</b>	<b>PSIG</b>
<b>MAXIMUM ALLOWABLE TREATING PRESSURE: If reached, human action required.</b>	<b>4300</b>	<b>PSIG</b>
<b>MAXIMUM ANTICIPATED TREATING PRESSURE: Based on frac design</b>	<b>4000</b>	<b>PSIG</b>

11. Install swabbing lubricator, swab test the Blinebry to the modified test tank. If the well unloads and will flow at a continuous rate connect the well to the existing flowline and flow test the well through the temporary test separator at the battery to measure flow rates. Continue to test until rates are stable. Report swab test to Midland and determine productivity.
- If the Blinebry zone produces in excess of 200 MCFGPD after the breakdown the well will be placed on production as a Blinebry producer without any additional stimulation. Once a stable rate has been determined and the downhole commingle permit has been approved the RBP will be retrieved and the well will be converted to a commingled Drinkard / Blinebry producer. Skip the following frac treatment and continue on with Step 16 of the procedure to place the well on production in the Blinebry.
  - If it produces less than 200 MCFGPD the Blinebry zone will be sand fracture stimulated then placed back on production as a Blinebry producer. Once a stable rate has been determined and the downhole commingle permit has been approved the RBP will be retrieved and the well will be converted to a commingled Drinkard / Blinebry producer. Continue on with Step 12 to sand frac the Blinebry and place on production.

**Blinebry Frac Prodcedure**

**(Assuming the Blinebry Test to be less than 200 MCFGPD)**

12. Load the tubing with 25 bbls of treated brine water. Release the M1-X treating packer and TOOH with tubing and packer.
13. ND the BOP stack and install 5,000 WP rental treating tree as shown in the attachment. Pressure test the tree to 5,000 PSIG. Hydraulically pressure test the hanger seal to 5,000 PSIG.
14. RU Schlumberger treating services. Install treating line with nitrogen actuated relief valve. Test the treating line to 6000 PSIG and set the relief valve at 4200 PSIG. Pump the acid frac as per the attached BJ Services recommendation. Pump the treatment as follows at design rate of 35 BPM not to exceed 0000 PSIG.

<b>TREATING LINE TEST PRESSURE: A minimum 1000 psig over MATP</b>	<b>6000</b>	<b>PSIG</b>
<b>MAXIMUM ALLOWABLE WORKING PRESSURE: Based on weakest component in system. 90% of burst pressure for 5 ½" tubing head.</b>	<b>4810</b>	<b>PSIG</b>
<b>NITROGEN POP OFF SET PRESSURE: Relief pressure set at the lesser of :</b>  300 psig less than 90% MAWP or, (Exception: 4500 PSIG equals 90% of MAWP)  300 psig over MATP	<b>4500</b>	<b>PSIG</b>
<b>MAXIMUM ALLOWABLE TREATING PRESSURE: If reached, human action required.</b>	<b>4300</b>	<b>PSIG</b>
<b>MAXIMUM ANTICIPATED TREATING PRESSURE: Based on frac design</b>	<b>4000</b>	<b>PSIG</b>

**Blinebry Sand Frac:**

- a. Pump 8,000 gals of YF140ST Pad at 35 BPM
- b. Pump 12,000 gals of YF140ST Pad containing 0.5 ppg of 100 mesh at 35 BPM
- c. Pump 8,000 gals of YF140ST Pad at 35 BPM
- d. Pump 3,000 gals of YF140ST containing 1.0 ppg of 20/40 S020 at 35 BPM
- e. Pump 4,000 gals of YF140ST containing 2.0 ppg of 20/40 S020 at 35 BPM
- f. Pump 4,000 gals of YF140ST containing 3.0 ppg of 20/40 S020 at 35 BPM
- g. Pump 4,000 gals of YF140ST containing 4.0 ppg of 20/40 S020 at 35 BPM
- h. Pump 5,000 gals of YF140ST containing 5.0 ppg of 20/40 S020 at 35 BPM
- i. Pump 6,000 gals of YF140ST containing 6.0 ppg of 20/40 S020 + 1.5% PN at 35 BPM
- j. Flush with 5428 gals of WF110 (2 bbls short of top perforation)
- k. Shut down and record 5, 10 and 15 minute pressures.
- l. Disconnect Schlumberger Pumping Services and RD
- m. Allow a minimum of 2 hours for the gel to break back then flow well back to the pit or tank until it dies.

15. Release the treating packer and TOO. PU 4 3/4" bit and TIH to clean out sand bridges to the top of the RBP. TOO with bit.
16. PU "poor boy" gas anchor (see design from prepull), 2 3/8" seating nipple with bottom joint being poly lined and TAC spaced out to set the seating nipple at 5580' (30' below the bottom Blinebry perforation) and the TAC to be set at 5450' or 36' above the top Blinebry perforation.
17. ND the BOP stack and install the B-1 adapter flange. See attached pumping wellhead "Type 3" drawing (beam pumping configuration with a choke on the casing). Pump or pour 5 gals of corrosion inhibitor down the tubing to coat the rods and pump as they are run in the hole. PU 1.25" RHBC pump on 6/6 Class "D" rod design and RIH to hang on beam pump. **(See attached Drinkard / Blinebry Beam Pump Design. RD and move off.**
18. **Notify Champion to place this well on truck treating schedule adjusted for new production volumes.**
19. **Report daily well tests and fluid levels to the Midland office for 30 days or until it pumps off and the production rate has stabilized. After the Blinebry production has stabilized and the downhole commingle permit has been approved continue with the procedure to retrieve the RBP and place on production as a commingled Drinkard / Blinebry producer.**

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**Drinkard & Blinebry Downhole Commingle Procedure (Pending Regulatory Approval)**

20. RU workover rig. RU pump truck to the casing. Pump 50 bbls of treated brine water to kill the Blinebry Unseat the pump and TOO with approximately 5580' of 3/4" Class D rods. Visually inspect rods for wear, pitting, paraffin and/or scale. Lay down any pitted or worn rods. Send the pump for teardown and rebuild.
21. ND the production tree and install the 5,000 PSIG WP BOP stack and test to 5,000 PSIG according to SOP's.
22. Release the TAC at 5450' and TOO with 5580' of 2 3/8" J-55 tubing.
23. PU retrieving head for the 5 1/2" RBP. TIH and reverse out remaining sand and ball sealers on top of RBP. Latch on to the RBP, release and TOO.
24. PU "poor boy" gas anchor (see design from prepull), 2 3/8" seating nipple with bottom joint being poly lined and TAC spaced out to set the seating nipple at 6430' and the TAC to be set at 5450'.
25. ND the BOP stack and install the B-1 adapter flange. See attached pumping wellhead "Type 3" drawing (beam pumping configuration with a choke on the casing). Pump or pour 5 gals of corrosion inhibitor down the tubing to coat the rods and pump as they are run in the hole. PU rebuilt 1.25" RHBC pump on 6/6 Class "D" rod design and RIH to hang on beam pump. **(See attached Drinkard / Blinebry Beam Pump Design. RD and move off.**
26. **Notify Champion to place this well on truck treating schedule adjusted for new production volumes.**
27. **Report daily well tests and fluid levels to the Midland office for 30 days or until it pumps off.**

