ENGINEER PG

API # 30-025-40521

DHC

Ruby Federal #8

462

e-mail Address

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -1220 South St. Francis Drive Santa Fe, NM 87505



		ADMINISTRATIVE APPLICATION CHECKLIST
TI	HIS CHECKLIST IS M	IANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE
Applic	[DHC-Dow	
[1]	TYPE OF AR	PPLICATION - Check Those Which Apply for [A] Location - Spacing Unit - Simultaneous Dedication NSL NSP SD Conoco Philps Commingling - Storage - Measurement 30-025 - to52(Conoco Philps Ruby Feder # 8
	Check [B]	Cone Only for [B] or [C] Commingling - Storage - Measurement DHC CTB PLC PC OLS OLM
	[C]	Injection - Disposal - Pressure Increase - Enhanced Oil Recovery WFX PMX SWD PII EOR PPR
	[D]	Other: Specify
[2]	NOTIFICAT [A]	ION REQUIRED TO: - Check Those Which Apply, or □ Does Not Apply □ Working, Royalty or Overriding Royalty Interest Owners
	[B]	○ Offset Operators, Leaseholders or Surface Owner
	[C]	Application is One Which Requires Published Legal Notice
	[D]	Notification and/or Concurrent Approval by BLM or SLO U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
	[E]	☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
	[F]	☐ Waivers are Attached
[3]		CURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE ATION INDICATED ABOVE.
	al is accurate a	FION: I hereby certify that the information submitted with this application for administrative and complete to the best of my knowledge. I also understand that no action will be taken on this quired information and notifications are submitted to the Division.
	Note:	Statement must be completed by an individual with managerial and/or supervisory capacity.
	n B. Maunder r Type Name	Signature Sr. Regulatory Specialist 6 18 13 Title Date
		Susan.B.Maunder@conocophillips.com

District I 1625 N. French Drive, Hobbs, NM 88240

District II 811 S. First St., Artesia, NM 88210

District III 1000 Rio Brazos Road, Aztec, NM 87410

District IV

TYPE OR PRINT NAME Susan B. Maunder

E-MAIL ADDRESS Susan.B.Maunder@conocophillips.com

State of New Mexico Energy, Minerals and Natural Resources Department

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

Form C-107A Revised August 1, 2011

APPLICATION TYPE

X_Single Well

Establish Pre-Approved Pools EXISTING WELLBORE

X Yes

APPLICATION FOR DOWNHOLE COMMINGLING

ConocoPhillips Company Operator		D. Box 51810 Midland, TX 79710 Iress)-1810
Ruby Federal Lease	8 UL P-Se Well No. Unit Letter-S	cc. 18-T17S-R32E Section-Township-Range	LEA County
OGRID No. 217817 Property Co	ode 38653 API No. 30-025	5-40521 Lease Type: X	FederalStateFee
DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Maljamar;Grayburg,SanAnd		Maljamar; Yeso West
Pool Code	43329		44500 (Paddock
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	prop'd perf's 3498-5273'		5375-6570'
Method of Production (Flowing or Artificial Lift)	Artificial		Artificial
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)	~1970 psi		0.465 psi/ft
Oil Gravity or Gas BTU (Degree API or Gas BTU)	39		36.6
Producing, Shut-In or New Zone	New Zone		Producing
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: Rates: see attached	Date: Rates:	Date: 04/30/2013 Rates: 59/285/115
Fixed Allocation Percentage (Note: If allocation is based upon something other	Oil / Gas	Oil Gas	Oil / Gas /
than current or past production, supporting data or explanation will be required.)	42 % 19 %	% %	58 % 81 %
	ADDITION	NAL DATA	
Are all working, royalty and overriding If not, have all working, royalty and ov Are all produced fluids from all commit will commingling decrease the value of If this well is on, or communitized with	erriding royalty interest owners bee ingled zones compatible with each of f production?	n notified by certified mail? other?	Yes X No No No No No No No Yes No No X X No X X X
or the United States Bureau of Land Manney NMOCD Reference Case No. applicable	anagement been notified in writing	of this application?	Yes_X No
Attachments: C-102 for each zone to be comming Production curve for each zone for For zones with no production histor Data to support allocation method of Notification list of working, royalty	gled showing its spacing unit and ac at least one year. (If not available, ry, estimated production rates and so or formula.	reage dedication. attach explanation.) upporting data. r uncommon interest cases.	
	PRE-APPRO	VED POOLS	
If application is	to establish Pre-Approved Pools, th	e following additional information wi	III be required:
List of other orders approving downhol List of all operators within the proposed Proof that all operators within the proposed Bottomhole pressure data.	d Pre-Approved Pools		
I hereby certify that the information	above is true and complete to t	he best of my knowledge and belie	ef.
Sugar	Maunder TITLE So	mion Domilatory Consistint	DATE 6/18/13

TELEPHONE NO. (_____) (432)688-6913

District 1
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

Phone: (505) 476-3460 Fax: (505) 476-3462

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 August 1, 2011 Submit one copy to appropriate District Office

M AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

30-025-4050	7		44500	0	Marie Comment								
Property C 38653	Code	Ruby	Federal		⁶ Well Number								
⁷ OGRID N 217817	No.	Cono	coPhillips Cor	mpany	8 Operate	or Name	17.7		⁹ Elevation 3976'				
7.17					" Surface	e Location			Total	1 0			
UL or lot no. Section P 18		Townshi 17S	P Range 32E	Lot Idn	Feet from t		Feet from the	East/West lin		Lea	County		
	10	170		tom Hol		If Different From		Duot		200			
UL or lot no.	Section 18	Townshi 17S		Lot Idn	Feet from t		Feet from the	East	/West line	Lea	County		
12 Dedicated Acres	13 Joint o	r Infill	¹⁴ Consolidation C	ode 15 Or	der No.								
16						T		PERATO y that the inform					
16							I hereby certif to the best of a owns a workin the proposed t		nation containe nd belief, and to eased mineral tion or has a r	ed herein is tr hat this organ interest in the right to drill th	ue and complete nization either e land including his well at this		
								n voluntary pool re entered by th		nder Date	6/7/		
							Susan B Printed Name						
							Susan.B	.Maunder	r@conoc	cophillip	os.com		

E-mail Address

Date of Survey

Certificate Number

620

S.L.

1000

"SURVEYOR CERTIFICATION
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.

Signature and Seal of Professional Surveyor.

New Mexico Oil Conservation Division C-102 Instructions

IF THIS IS AN AMENDED REPORT, CHECK THE BOX LABELED "AMENDED REPORT" AT THE TOP OF THIS DOCUMENT.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed contact the appropriate OCD district office. Independent subdivision surveys will not be acceptable.

- The OCD assigned API number for this well.
- The pool code for this (proposed) completion.
- The pool name for this (proposed) completion.
- The property code for this (proposed) completion.
- The property name (well name) for this (proposed) completion.
- The well number for this (proposed) completion.
- Operator's OGRID number.
- The operator's name.
- The ground level elevation of this well.
- 10. The surveyed surface location of this well measured from the section lines. NOTE: If the United States government survey designates a Lot Number for this location use that number in the 'UL or lot no.' box. Otherwise use the OCD unit letter.
- Proposed bottom hole location. If this is a horizontal hole indicate the location of the end of the hole.
- The calculated acreage dedicated to this completion to the nearest hundredth of an acre.
- 13. Put a Y if more than one completion will be sharing this same acreage or N if this is the only completion on this acreage.
- 14. If more than one lease of different ownership has been dedicated to the well show the consolidation code from the following table:
 - C Communitization
 - U Unitization
 - F Forced pooling
 - O Other
 - P Consolidation pending

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!

- 15. Write in the OCD order(s) approving a non-standard location, non-standard spacing, or directional or horizontal drilling.
- 16. This grid represents a standard section. You may superimpose a non-standard section over this grid. Outline the dedicated acreage and the separate leases within that dedicated acreage. Show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. (Note: A legal location is determined from the perpendicular distance to the edge of the tract.) If this is a high angle or horizontal hole, show that portion of the well bore that is open within this pool.

Show all lots, lot numbers, and their respective acreage.

If more than one lease has been dedicated to this completion, outline each one and identify the ownership as to both working interest and royalty.

- The signature, printed name and e-mail address of the person authorized to make this report, and the date this document was signed.
- 18. The registered surveyors certification. This section does not have to be completed if this form has been previously accepted by the OCD and is being filed for a change of pool or dedicated acreage.

District.1
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
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District.111
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District.117
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

30-025-40507

⁴ Property Code

OGRID No.

API Number

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 August 1, 2011 Submit one copy to appropriate District Office

☐ AMENDED REPORT

⁶ Well Number

⁹ Elevation

١	M	E	T	T	T	0	C	Δ	П	Γī	0	T	J	۸	1	J	١	Δ	0	'E	21	F	Δ	-	21	F	г	ì			T	Δ	7	П	1	17	N	I	P	1	17	Г	
٦	w	г	л.	-1		U	Ν.	, pa	١I			ш	v	H	ΑT	N	,	н	١.	. P	C I	г.	А		ш	г.		"	2	.,	ш	H	L١			31	N	- 1	-1	15	٩.		

⁵ Property Name

⁸ Operator Name

Maljamar; Grayburg, San Andres

² Pool Code

43329

Ruby Federal

	Conocc	ornillips Com	ipany				39/6	
				" Surface I	ocation			
Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
18	178	32E		1000	South	620	East	Lea
10	110		om Hole				Laure .	2000
Castion	Township						Fast/West New	Country
			Lot Idn			1099		County
	100000		Lu		South	1011	East	Lea
Joint o	r Infill	Consolidation Co	de 15 Ord	er No.				
will be ass	signed to	this completio	n until all	interests have b	been consolidated of	or a non-standar	d unit has been ap	proved by the
					BHL 1099 621	I hereby certify to the best of n owns a working the proposed b location pursus interest, or to d order heretofo Signature Susan B Printed Name Susan.B E-mail Addre II SURV I hereby ce plat was pi made by m same is true	that the information contains by knowledge and belief, and to ginterest or unleased mineral cottom hole location or has a rant to a contract with an owner woluntary pooling agreement re entered by the division. Maunder Maunder CEYOR CERTITITY that the well local cotted from field notes to or under my supervice and correct to the belief	the true and complete that this organization either interest in the land including light to drill this well at this or a compulsory pooling or a compulsory pooling. Date Date TFICATION tion shown on this of actual surveys sion, and that the lest of my belief.
	Section 18	Section Township 18 17S Section Township 18 17S s 13 Joint or Infill	Section Township Range 18 17S 32E Botto	18	Section Township Range Lot Idn Feet from the 18 17S 32E 1000 "Bottom Hole Location If Section Township Range Lot Idn Feet from the 18 17S 32E	Section Township Range Lot Idn Feet from the South "Bottom Hole Location If Different From Section Township Range Lot Idn Feet from the North/South line 32E South "Bottom Hole Location If Different From Section Township Range Lot Idn Feet from the South South South South Inc. South South Idne South South Idne South South Idne South South South South Idne South South South South South South South South Idne South So	**Surface Location Section Township Range Lot Idn Feet from the South S	**Surface Location Section Township Range Lot Idn Feet from the Royth/South line East

New Mexico Oil Conservation Division C-102 Instructions

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- The OCD assigned API number for this well.
- The pool code for this (proposed) completion.
- The pool name for this (proposed) completion.
- The property code for this (proposed) completion.
- The property name (well name) for this (proposed) completion.
- The well number for this (proposed) completion.
- Operator's OGRID number.
- The operator's name.
- The ground level elevation of this well.
- 10. The surveyed surface location of this well measured from the section lines. NOTE: If the United States government survey designates a Lot Number for this location use that number in the 'UL or lot no.' box. Otherwise use the OCD unit letter.
- Proposed bottom hole location. If this is a horizontal hole indicate the location of the end of the hole.
- The calculated acreage dedicated to this completion to the nearest hundredth of an acre.
- Put a Y if more than one completion will be sharing this same acreage or N if this is the only completion on this acreage.
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Show all lots, lot numbers, and their respective acreage.

If more than one lease has been dedicated to this completion, outline each one and identify the ownership as to both working interest and royalty.

- 17. The signature, printed name and e-mail address of the person authorized to make this report, and the date this document was signed.
- 18. The registered surveyors certification. This section does not have to be completed if this form has been previously accepted by the OCD and is being filed for a change of pool or dedicated acreage.

Maljamar-Yeso West and Grayburg-San Andres Pool Co-mingle

Co-mingle Application

Summary

It is proposed to co-mingle the Maljamar-Yeso West and Grayburg-San Andres pools in ConocoPhillips' Yeso development program in Section 18 and 17, T17S, R32E, Lea County, New Mexico. The working, net revenue, and royalty interest are the same for both pools on most of COP's Ruby Federal and Mitchell B lease. The fluids from both zones are compatible. The following fixed allocation will be used for production: Oil: Yeso 58%, GB/SA 42%, Gas: Yeso 81%, GB/SA 19%.

Purpose

COP requests to co-mingle both pools in order to access reserves that would otherwise be stranded. Development of the Grayburg-San Andres with dedicated wells is not economic as initial production rates and recoveries are very low. Yeso development is economic independently. The co-mingling of these two pools is expected to enhance production and boost ultimate recovery from the field. This will result in increased income for both the BLM and COP.

With co-mingling, the total recoverable resource in the GB/SA pool overlying COP's Ruby Federal lease is estimated to be ~3 MMBO and 5 BCFG or an incremental 67 MBO and 133 MMcf per well.

History

ConocoPhillips operates the Mitchell B lease in Section 18 and 17, T17S R32E. This lease has produced from the GB/SA since the 1950's. Historically, the GB/SA has not been very productive in Mitchell B due to low reservoir permeability and the use of outdated completion techniques. As a result of low productivity, a significant amount of oil has been bypassed. It is believed this resource can be economically produced by modern completions and co-mingling with Yeso production.

Development of the Maljamar-Yeso West pool in began in 2008 targeting the Paddock and Blinebry formations of the Yeso. The Yeso has proven to be a very successful, high rate of return play. The productive potential of these zones has been unlocked with improvements in completion practice, namely larger frac's. ConocoPhillips plans to continue its Yeso development program throughout Sections 18 and 19, T17S R32E over the next few years.

Reservoir Details

With co-mingling, Yeso and GB/SA will be developed on 20-acre spacing. Oil — gravity between the Yeso and GB/SA reservoirs is similar, 38 and 37 degrees — API respectively.

The Yeso is a normally pressured reservoir (~0.465 psi/ft). The Grayburg/San Andres is expected to be normally pressured to slightly under-pressured due to historical production. If the GB/SA reservoir pressure is found to be under-pressured, cross-flow will be mitigated by ensuring the co-mingled wells are pumped off or producing fluid level is at least below the GB/SA perforations. However, if there is temporary cross-flow into the GB/SA due to a high fluid level, it is expected production will be recovered once the fluid level is pumped back down.

Allocation Method

The production allocation method for both zones is based on a fixed allocation. This allocation is based on the type curves for both the Yeso and GB/SA formations. These type curves were generated using wells which only produce from Yeso or GB/SA within the same geologic area as the co-mingle candidates, Figure 1. Due to the close proximity of these wells, it is believed existing production provides sufficient insight for co-mingling allocation.

Supporting Details

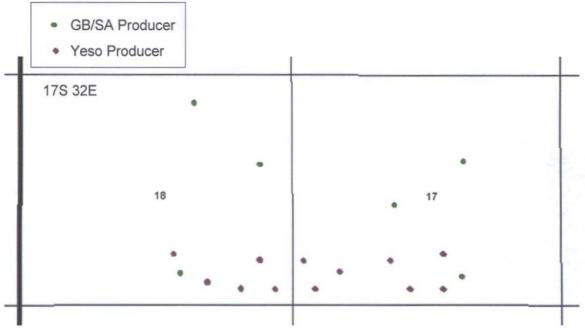


Figure 1: Map of all wells used in the analysis

17S 32E		
7	8	9
MITCHELL B#1 MITCHELL	B#4 MITCHELLB#3 MITCHELLB#19 17	16
MITCHELL B#20	MITCHELL B#9	10
19	20	21

Figure 2: Map of GB/SA wells used in type curve analysis (Mitchell B Lease).

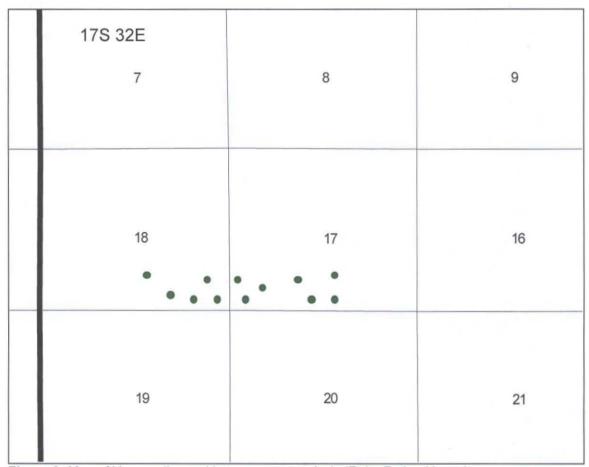


Figure 3: Map of Yeso wells used in type curve analysis (Ruby Federal lease).

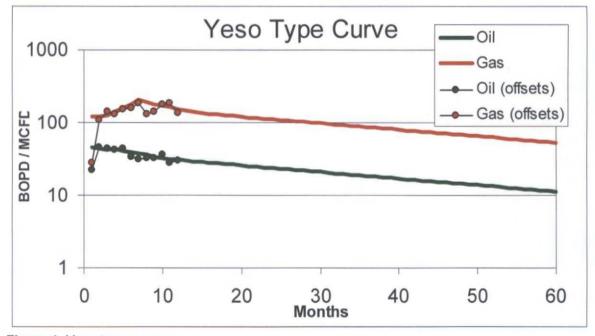


Figure 4: Yeso type curve.

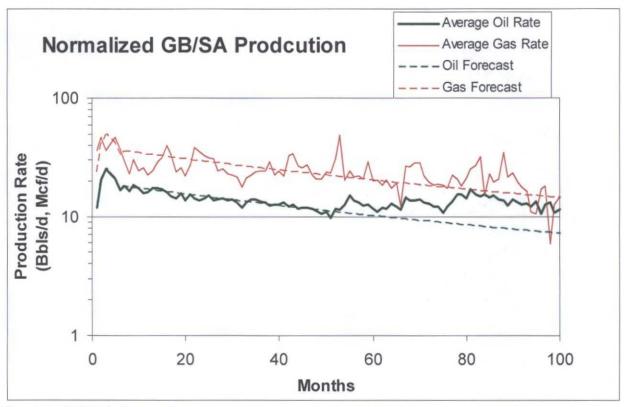


Figure 5: GB/SA type curve

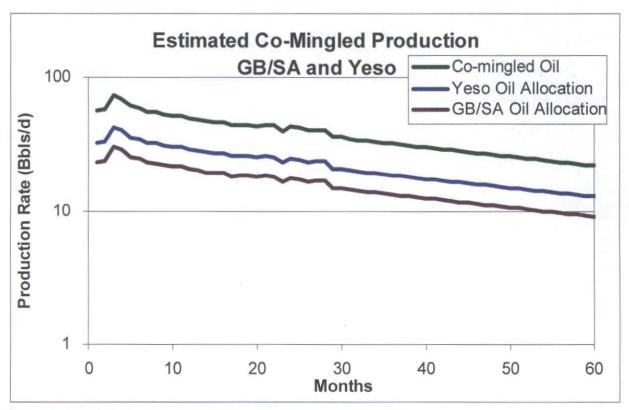
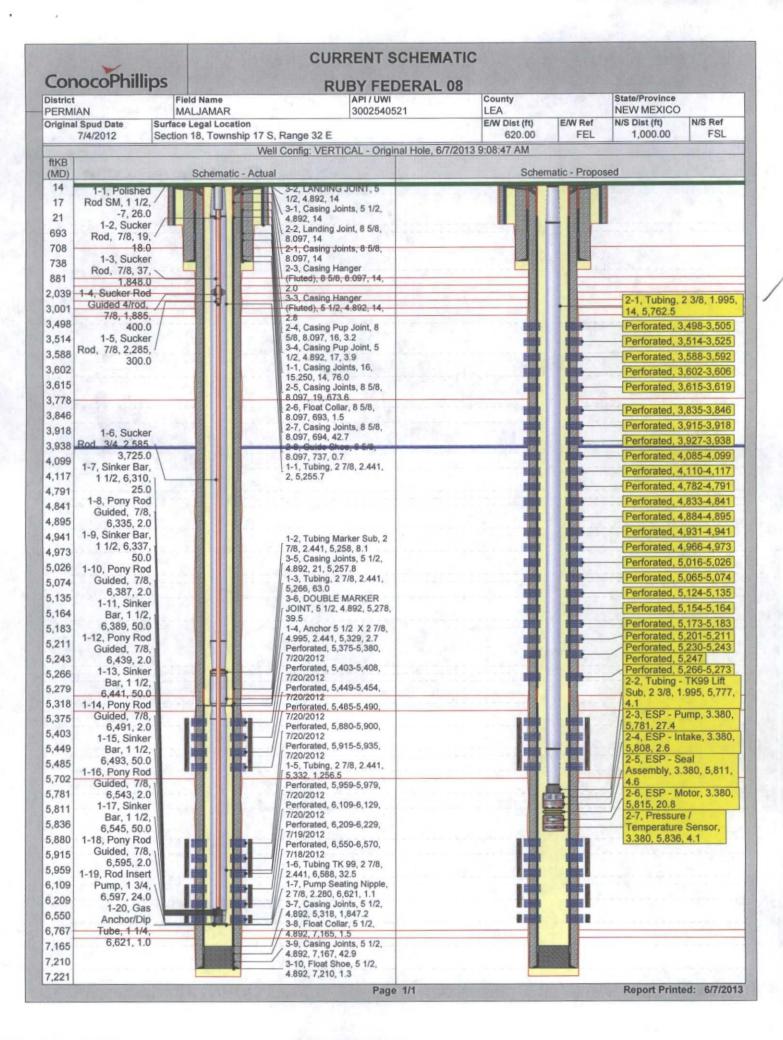


Figure 6: Co-mingled type curve





Susan B. Maunder Sr. Regulatory Specialist Phone: (432) 688-6913 ConocoPhillips Company P.O. Box 51810 Midland, TX 79710-1810

June 18, 2013

COG Operating LLC One Concho Center 600 West Illinois Avenue Midland, Texas 79701

SUBJECT: REQUEST FOR APPROVAL OF DOWNHOLE COMINGLING FOR RUBY FEDERAL #8

Dear Sir or Madam,

ConocoPhillips Company is requesting an approval to Downhole Comingle the Maljamar; Yeso West Pool (44500) and the Maljamar; Grayburg, San Andres Pool (43329) in the Ruby Federal #8 well. The lease is recorded as NM LC 029405B. The well is located in UL P, 1000' from the south line and 620' from the east line of Section 18, Township 17S, Range 32E, Lea County, New Mexico. ConocoPhillips is 100% lessee and 100% working interest owner of the Ruby federal lease. The lease to the south is NM LC 029405A. You are being provided notification of this action as an interest owner in the spacing unit. Any comments need to be provided to New Mexico Oil Conservation Division; 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505 within 20 days.

If you have questions regarding this request, I can be reached at 432-688-6913 or via email at Susan.B.Maunder@conocophillips.com.

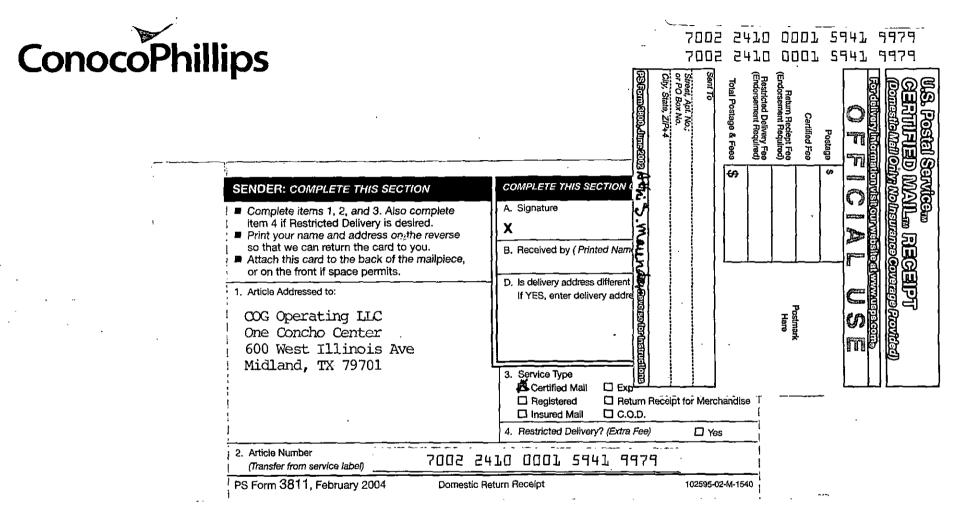
Sincerely,

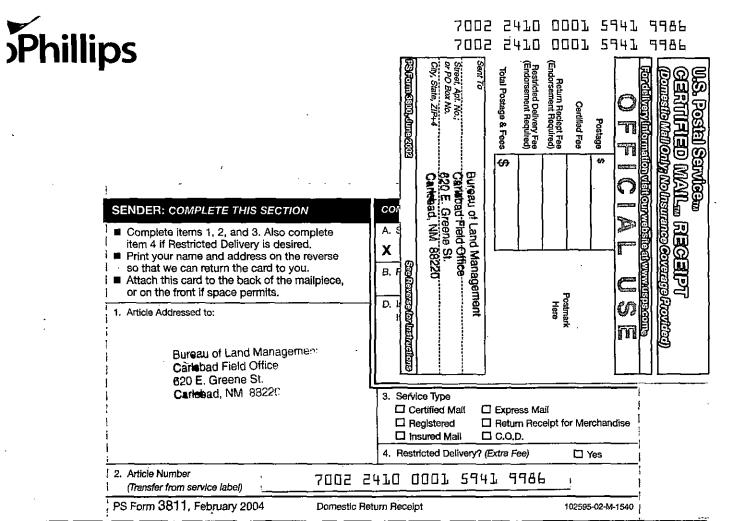
Susan B. Maunder

Senior Regulatory Specialist ConocoPhillips Company

BMaunder

ConocoPhillips Company MCBU Regulatory P.O. Box 51810 Midland, TX 79710







Susan B. Maunder Sr. Regulatory Specialist Phone: (432) 688-6913 ConocoPhillips Company P.O. Box 51810 Midland, TX 79710-1810

June 18, 2013

State of New Mexico
Oil Conservation Division
Attn: Mr. Phillip Goetze
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

RECEIVED OCD

SUBJECT: REQUEST FOR APPROVAL OF DOWNHOLE COMINGLING FOR RUBY FEDERAF#8

Dear Mr. Goetze,

ConocoPhillips Company respectfully requests an approval of our plans to Downhole Comingle the Maljamar; Yeso West Pool (44500) and the Maljamar; Grayburg, San Andres Pool (43329) in the Ruby Federal #8 well. The lease is recorded as NM LC 029405B. The well is located in UL P, 1000' from the south line and 620' from the east line of Section 18, Township 17S, Range 32E, Lea County, New Mexico. ConocoPhillips is 100% lessee and 100% working interest owner of the Ruby federal lease. Royalty interest is the same in both pools. The lease to the south is NM LC 029405A. The interest percentages for the lease to the south are: COG Operating LLC 75% and ConocoPhillips Company 25%. The granting of this request will prevent waste by providing access to otherwise marginal production.

Enclosed are the following documents in support of this request.

Administrative Application Checklist

1san B. Maunder

- Copy of the New Mexico Form C-107A (with attachments)
- Copy of letter sent to spacing unit interest owners.

A copy of this letter is being sent to Bureau of Land Management, Carlsbad Field Office. Notification is being provided by separate letter to interest owners in the spacing unit (as per NMAC 19.15.12) via certified return receipt.

If you have questions regarding this request, I can be reached at 432-688-6913 or via email at <u>Susan.B.Maunder@conocophillips.com</u>.

Sincerely,

Susan B. Maunder

Senior Regulatory Specialist ConocoPhillips Company