



ConocoPhillips Company P.O. Box 51810 Midland, TX 79710-1810

July 20, 2015

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

Westonic MIT Production

SUBJECT: REQUEST FOR APPROVAL OF DOWNHOLE COMMINGLE FOR BRITT B LEASE

To Whom It May Concern:

ConocoPhillips Company respectfully requests an approval of our plans to Downhole Commingle the Skaggs-Glorieta Pool (57190) with the pre-approved pools Weir-Blinebry (63780), Weir-Blinebry East (63800), Monument-Tubb (47090), and Skaggs-Drinkard (57000) pools in ConocoPhillips' Blinebry, Tubb, Drinkard development program in Sections 10 and 15, T20S, R37E, Lea County, New Mexico.

Enclosed are the following documents in support of this request.

- Administrative Application Checklist
- 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 any questions regarding this request, I can be reached at 432-688-6938 or via email at ashley.bergen@cop.com

Sincerely,

Ashley Bergen Regulatory Specialist ENGINEER MAM

LOGGED IN 7/24/15

TYPE DHC

APP NO p 5 A 6 15 2 05 945 576

ABOVE THIS LINE FOR DIVISION USE ONLY

### NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



## **ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

		WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE	
Applic	ation Acronym: [NSL-Non-Stat	dard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]	
	-	hole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling] ol Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]	
	-	[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]	
	rean a	[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase] ified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]	7
	[EUK-Qua	ified Enhanced Oil Recovery Certification] [PPR-Positive Production Response] UHCF, PLICATION - Check Those Which Apply for [A]	_
[1]		PLICATION - Check Those Which Apply for [A]	
	[A]	Location - Spacing Unit - Simultaneous Dedication well: Bit H & #51,52,53	5
	Check	One Only for [B] or [C]	ı
	[B]	O I II - Gran Man	
		I DHC   CTB   PLC   PC   OLS   OLM Pool Weil: 6line	6
	[C]	Injection - Disposal - Pressure Increase - Enhanced Oil Recovery	
		WFX PMX SWD IPI EOR PPR	
	[D]	Other: Specify	
<b>503</b>	NOTIFICATI	Other: Specify	
[2]		ON REQUIRED TO: - Check Those Which Apply, or Does Not Apply  Working, Royalty or Overriding Royalty Interest Owners	
	[, ,]	Totaling, respanse of overraining respanse 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 TION INDICATED ABOVE.	
	/al is <b>accurate</b> ai	<b>FION:</b> I hereby certify that the information submitted with this application for administrative and <b>complete</b> to the best of my knowledge. I also understand that <b>no action</b> will be taken on this juired information and notifications are submitted to the Division.	
	, Note:	Statement must be completed by an individual with managerial and/or supervisory capacity.	
A aLT	ar Dargan	a M Oor Board . Boardstone Specialist	
	<u>ey Bergen</u> r Type Name	Signature Regulatory Specialist Date	
		ashley.bergen@conocophillips.com	

e-mail Address

<u>District 1</u> 1625 N. French Drive, Hobbs, NM 88240

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

District III 1000 Rio Brazos Road, Aztee, NM 87410

District IV

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

### 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

\_\_\_Yes X\_No

### APPLICATION FOR DOWNHOLE COMMINGLING

ConocoPhillips Company Operator		O. Box 51810 Midland, TX 79710 dress	)		
Britt B	54 O- 10- 2	20S- 37E	Lea		
lease		Section-Township-Range	County		
OGRID No.217817 Property Co	ode <u>31365</u> API No. <u>30-02</u> :	5- Lease Type: X	FederalStateFee		
DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE		
Pool Name	Skaggs Glorieta	Weir- Blinebry	Monument Tubb		
Pool Code	57190	63780	47090		
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	~5213'-5343' TVD	~5651'-6359' TVD	6359'-6680' TVD		
Method of Production (Flowing or Artificial Lift)	Artifical Lift	Artifical Lift	Artifical Lift		
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 13(9% of the depth of the top perforation in the upper zone)	~2555	~2440	~2150		
Oil Gravity or Gas BTU (Degree API or Gas BTU)	~39	~39	~39		
Producing, Shut-In or New Zone	New Zone	New Zone	New Zone		
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production	Date:	Date:	Date:		
estimates and supporting data.)	Rates: TBD	Rates: TBD	Rates: TBD		
Fixed Allocation Percentage (Note: If allocation is based upon something other	Öil Gas	Oil Gas	Oil Gas		
than current or past production, supporting data or explanation will be required.)	TBD % TBD %	TBD% TBD%	TBD% TBD%		
,	ADDITIO	NAL DATA			
Are all working, royalty and overriding f not, have all working, royalty and ov			Yes No Yes No		
Are all produced fluids from all commi	ngled zones compatible with each of	other?	Yes_XNo		
Will commingling decrease the value o	f production?		Yes NoX		
f this well is on, or communitized with the United States Bureau of Land Ma			YesXNo		
MOCD Reference Case No. applicable	le to this well:		_		
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 reveals.	at least one year. (If not available, ry, estimated production rates and sor formula.	attach explanation.) supporting data.			

Any additional statements, data or documents required to support commingling.

District L 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 1220 S. St. Francis Dr., Sunta Fe. NM 87505

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

\_\_\_\_Yes \_x\_No

### APPLICATION FOR DOWNHOLE COMMINGLING

ConocoPhillips Company		P.	O. Box 518	10 Midland, TX	79710	)		
Operator		Ac	ldress					
Britt B	54		0S- 37E				Lea	
Lease	Well No.	Unit Letter	-Section-Tow.	iship-Range			County	
OGRID No. <u>217817</u> Property Co	de_ <u>31365</u>	API No. 30-02	5-	Lease Ty	ре: <u>Х</u>	_Federal _	State	Fee
DATA ELEMENT	UPPE	R ZONE	INTE	RMEDIATE ZO	ONE	LOV	VER ZO	ONE
Pool Name						Skaggs Drin	ıkard	
Pool Code						5700		
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)						~6680'-6983	3' TVD	
Method of Production (Flowing or Antificial Lift)						Artifical Lif	t	
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)						~2100		
Oil Gravity or Gas BTU - (Degree API or Gas BTU)						~39		
Producing, Shut-In or New Zone						New Zone		
Date and Oil/Gas/Water Rates of								
Last Production. (Note: For new zones with no production history,	Date:		Date:			Date:		
applicant shall be required to attach production estimates and supporting data.)	Rates:		Rates:			Rates: TBD	)	
Fixed Allocation Percentage (Note: If allocation is based upon something other	Oil	Gas	Oil	Gas		Oil	G	as
than current or past production, supporting data or explanation will be required.)	%	6 %		%	%	TBD	%	TBD%
		ADDITIO	NAL DAT	<u>A</u>				
Are all working, royalty and overriding	rovalty interests	identical in all co	mmingled ze	ones?		Ye:	3 <b>X</b>	No
If not, have all working, royalty and ove						Yes	;	No
Are all produced fluids from all commi	ngled zones com	patible with each	other?			Yes	sX	No
Will commingling decrease the value of	f production?				,	Yes	i	No X
If this well is on, or communitized with or the United States Bureau of Land Ma					nds	Yes	X	No
NMOCD Reference Case No. applicabl	e to this well: _					AAAAAA,aaaa		
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 Any additional statements, data or or comments.	at least one year, y, estimated pro or formula. and overriding	. (If not available, duction rates and a royalty interests for	attach expla supporting d or uncommon	nation.) ata.		,		

DISTRICT I
1625 N. French Dr., Hobbs, NM 68240
Phone (676) 393-6161 Fax: (676) 393-0720
DISTRICT II
1301 W. Grand Avenue, Artezia, NM 68210
Phone (676) 748-1283 Fax: (675) 748-9720
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (606) 334-6178 Fax: (506) 334-6170

DISTRICT IV 1220 S. St. Francis Dr., Santa Fe, NM 67505 Phone (605) 476-3460 Fax: (506) 476-3482 State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102 Revised August 1, 2011

Submit one copy to appropriate District Office

### OIL CONSERVATION DIVISION

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool	Name			
30-025-	57190	Skaggs Glorieta				
Property Code	Prop	Well Number				
31365	BF	BRITT B				
OGRID No.	Орез	Operator Name				
217817	217817 CONOCO PHILLIPS					

#### Surface Location

ſ	UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	0	10	20 S	37 E		445	SOUTH	1805	EAST	LEA

#### Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot ldn	Feet from the	North/South line	Feet from the	East/West line	County
0	10	20 S	37 E		660	SOUTH	1980	EAST	LEA
Dedicated Acres   Joint or Infill   Consolidation Code			Code Or	der No.					
40									

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

	DARD UNII HAS BEE		
			OPERATOR CERTIFICATION  I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hale location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.  Signature  Date  Ashley Bergen  Printed Name  ashley.bergen@cop.com  Email Address
                 	BOTTOM HOLE LOCATION     Lat - N 32'34'55.81"     Long - W 103'14'13.92"     NMSPCE - N 577263.3     NMSPCE - E 879969.8     (NAD-83)     Lat - N 32"34'55.37"     Long - W 103'14'12.20"     NMSPCE - E 837787.1     (NAD-27)		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 supervison and that the same is true and correct to the best of my belief.  Date Synteyed  Signature a Sen of
SURFACE LOCATION  Lat - N 32*34*53.68"  Long - W 103*14*11.87"  NMSPCE - N 577049.621  E 879147.644  (NAD-83)  Lat - N 32*34*53.24"  Long - W 103*14*10.15"  NMSPCE - N 576988.036  (NAD-27)	89.14 80.00 80	1980'	Certificate No. Gary L. Jones 7977  BASIN SURVEYS 25434

DISTRICT I 1625 N. French Dr., Hobbs, NM 58240 Phone (675) 393-5161 Pax: (676) 393-0720 DISTRICT II 1301 W. Grand Avenue, Artesia, NM 68210 Phone (675) 748-1283 Fax: (575) 748-9720

DISTRICT IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone (505) 476-3460 Fam (506) 476-3482

DISTRICT III

State of New Mexico Energy, Minerals and Natural Resources Department

Form C-102 Revised August 1, 2011

Submit one copy to appropriate District Office

# 1000 Rio Brazos Rd., Aztec, NM 87410 Phone (605) 334-6178 Fax: (605) 334-6170

### OIL CONSERVATION DIVISION

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

□ AMENDED REPORT

API Number	Pool Code	Pool Name				
30-025-	63780; 47090; 57000	Weir Blinebry; Monument Tubb; Skaggs Drinkard				
Property Code	Prope	Well Number				
31365	BR	BRITT B				
OGRID No.	Opera	Operator Name				
217817	CONOCC	PHILLIPS	3578'			

#### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	10	20 S	37 E		445	SOUTH	1805	EAST	LEA

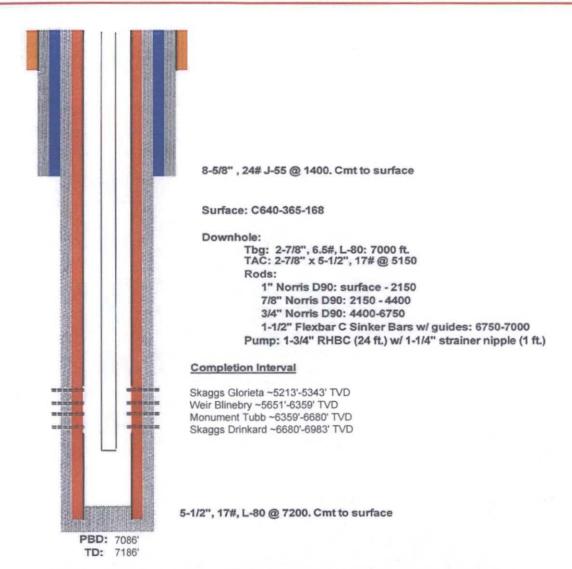
#### Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	10	20 S	37 E		660	SOUTH	1980	EAST	LEA
Dedicated Acres	Joint o	r Infill Co	nsolidation	Code Or	der No.				
40									

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

	OK A NON-SIAN			
		BOTTOM HOLE LOCATION Lat - N 32'34'55.81" Long - W 103'14'13.92" NMSPCE - E 879969.8 (NAD-83)		OPERATOR CERTIFICATION  I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hale location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooting agreement or a compulsory pooling order heretofore entered by the division.  Signature Date  Ashley Bergen  Printed Name  ashley.bergen@cop.com  Email Address  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 supervison and that the same is true and correct to the best of my belief.
		Lat — N 32°34'55.37" Long — W 103°14'12.20" NMSPCE— N 577201.7 E 837787.1 (NAD-27)		Date Sympleyof Markets Signature & See of
{	SURFACE LOCATION  Lot - N 32*34*53.68** .ong - W 103*14*11.87** NMSPCE- N 577049.621 E 879147.644 (NAD-83)  Lot - N 32*34*53.24** .ong - W 103*14*10.15** IMSPCE- N 576988.036 E 837964.888 (NAD-27)	BH B	—1980' ——1805'————————————————————————————————————	Certificate No. Gary L. Jones 7977  BASIN SURVEYS 25434

# Britt B 54 Proposed Well Schematic: Production Well



# Skaggs-Glorieta Pool Commingling with Weir-Blinebry (or Weir-Blinebry East), Monument-Tubb, and Skaggs-Drinkard Pools

Britt-B Acreage Field Study and Preliminary Results

### Summary

ConocoPhillips is proposing to commingle the Skaggs-Glorieta pool with the three preapproved pools, i.e., Weir-Blinebry (or Weir-Blinebry East)\* pool, Monument-Tubb pool, and Skaggs-Drinkard pool as a part of ConocoPhillips' Blinebry, Tubb, and Drinkard (BTD) development program in Sections 10, 11, and 15, T20S, R37E, Lea County, New Mexico. The working, net revenue, and royalty interests are the same for all pools within the lease being proposed for this commingle. The fluids from all zones are compatible. The allocation will be determined through down-hole production allocation tests after completion.

# **Purpose**

ConocoPhillips requests to commingle the Skaggs-Glorieta ("Glorieta") with the three pre-approved pools, i.e., Weir-Blinebry (or Weir-Blinebry East) pool, Monument-Tubb pool, and Skaggs-Drinkard pools, in SW/4 NW/4 and S1/2 Section 10, W1/2 SW1/4 Section 11, and W/2 and W/2 E/2 Section 15, T20S-R37E in order to access reserves that would otherwise be stranded. Development of the Blinebry, Tubb, and Drinkard (BTD) is not competitively economic as initial production rates and recoveries are low. The commingling of these pools is expected to enhance production and boost ultimate recovery from the field. This will result in increased revenue for royalty interests and lease holder.

With commingling, the total recoverable resource in COP's Britt-B lease is estimated to be ~5.8 MMBO and 11.3 BCFG or an incremental 165 MBO and 324 MMCF per well, for up to 35 potential 40-acre and 20-acre spaced wells in the Britt-B lease. Our 2017 development plan targeting the Glorieta plus BTD includes the Britt B 51, Britt B 52, Britt B 53, Britt B 54, and Britt B 55 proposed wells.

# History

ConocoPhillips operates the Britt-B lease in Sections 10, 11, and 15, T20S R37E. This lease has produced from the BTD since the 1960's. Historically, the BTD has been successful in this area with high Initial Production (IP) and long production lives. However, as reservoir pressure declines and the reserves move into lower reservoir quality areas, the BTD pool is becoming uncompetitive and uneconomic. A review of a nearby drilling program meant to produce the BTD pools suggests that the production from the two zones (Glorieta and BTD) needs to be commingled to have more favorable economics, especially in the current economic environment.

<sup>\*</sup> The same formation, Blinebry is called by Weir-Blinebry pool or Weir-Blinebry East pool, depending only on surface location.

The Glorieta started to be commingled with the BTD as early as 1979 in the Britt-B #26 (See Figure 1). It showed some uplift potential. For example, the Glorieta in the Britt-B #13 was discovered to have potential to produce at high rates. The high rate was again repeated in 1998 in the Britt-B #34, with exclusive Glorieta production. The Glorieta, however, hasn't shown consistent results and is considered uneconomic by itself. Therefore, in conjunction with modern completion methods, the commingling of the Glorieta and Blinebry, Tubb, and Drinkard pools in the ConocoPhillips Britt-B lease will allow both of these reserves to be produced economically and at low risk. If this pilot project is successful it will prove the viability of further downhole commingling in future wells. This would also allow recompletions into the Glorieta to be commingled with historical BTD production.

### Reservoir Details

The Glorieta and BTD are substantially similar in characteristics to make them compatible for downhole commingling. Oil gravity comparisons between the Glorieta, Blinebry, Tubb, and Drinkard reservoirs indicate that the type of oil found in these reservoirs is similar; approximately 39 degrees API according to the Britt-B #34 and SEMU #174 production analyses.

The upper Blinebry, Tubb, and Drinkard are the better reservoir quality areas of the Yeso group formations. The Drinkard tends to be more water saturated than the other formations, while the Tubb tends to be gassier than the other two. The reservoir productive quality is striated with low permeability areas. There is a lot of gross interval to net pay in the Yeso group reservoirs (see Figure 2).

The Glorieta is a higher porosity-permeability reservoir, usually with good oil saturation (see Figure 3). There is a risk of water production due to its proximity with the water saturated Paddock formation below it. A cross section is included in Figure 4.

The pore pressure gradients for the Glorieta and BTD are expected to be similar (~0.40 psi/ft). The BTD is expected to be normally pressured to slightly under-pressured due to historical production. If there is cross-flow between the two zones due to a high fluid level or over-pressured zone, it is expected that production will be recovered once the fluid level is pumped back down or the pressure stabilizes between the two zones.

Production is expected to vary widely among the layers. There will be a total of four layers spreading approximately 1,800 feet apart. The majority of the water is expected to come from the lowest and highest zones (Drinkard and Glorieta). The majority of the gas is expected to come from the middle two layers (Blinebry and Tubb). This, however, is speculation based on a study done in the Warren Unit. The production test and production profile will be useful in confirming this along with the Glorieta production. Appendix A includes the economics for BTD production which is requested to be kept confidential.

### **Allocation Method**

The production allocation method for all zones will be based on a cumulative zone production test (subtraction method) carried out post completion. This will be done the following way:

The Blinebry-Tubb-Drinkard zone will be completed and production tested for a minimum of 45 days. Afterwards, the Blinebry-Tubb-Drinkard will be isolated by a retrievable bridge plug positioned above the Blinebry completion. The Glorieta will be completed and production tested for a minimum 45 days. Afterwards, following the removal of the retrievable bridge plug, the well will be placed on production from the Glorieta & Blinebry-Tubb-Drinkard with production allocation (oil, gas & water) based on:

<u>Glorieta Allocation</u>: Glorieta well test volumes / (Glorieta well test volumes + Blinebry-Tubb-Drinkard well test volumes)

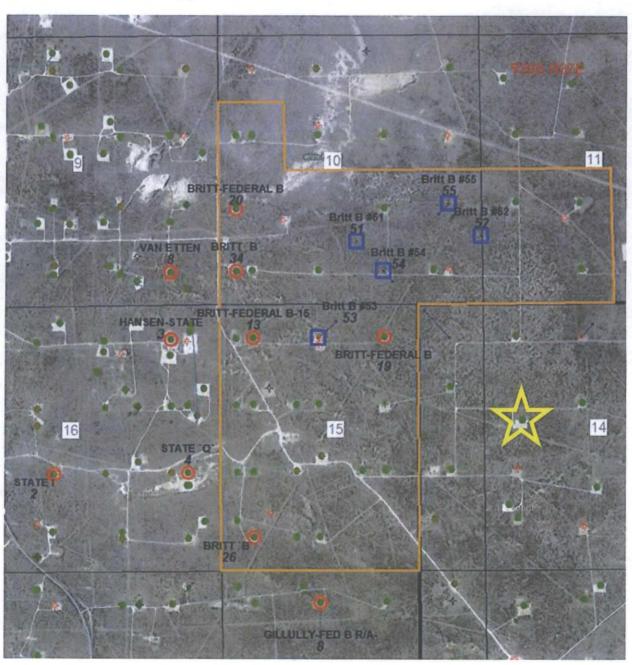
<u>Blinebry-Tubb-Drinkard Allocation</u>: Drinkard well test volumes / (Glorieta well test volumes + Blinebry-Tubb-Drinkard well test volumes)

Our proposal includes production tests on the first two or three wells, depending on initial results.

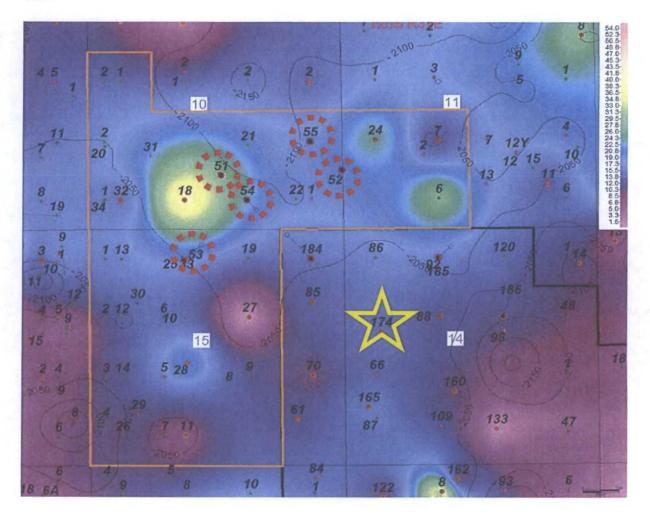
Based on our review of historical production, the expected allocation for new drill wells is 36% from the Glorieta and 64% from the BTD, according to the estimated first year production average on BOE basis.

# **Preliminary Supporting Details**

**Figure 1:** Map of all wells used in the Glorieta forecast, which are circled in red. Note that the wells outlined by blue squares are the proposed new drills and the BTD type curve well is indicated by yellow star.



**Figure 2:** Blinebry/Tubb/Drinkard reservoir quality (SoPhiH) map. The wells with red circles are the proposed Britt-B wells, and the one with yellow Star is SEMU 174 type-well.



**Figure 3:** Glorieta reservoir quality (SoPhiH) map. The wells with red circles are the proposed Britt-B wells.

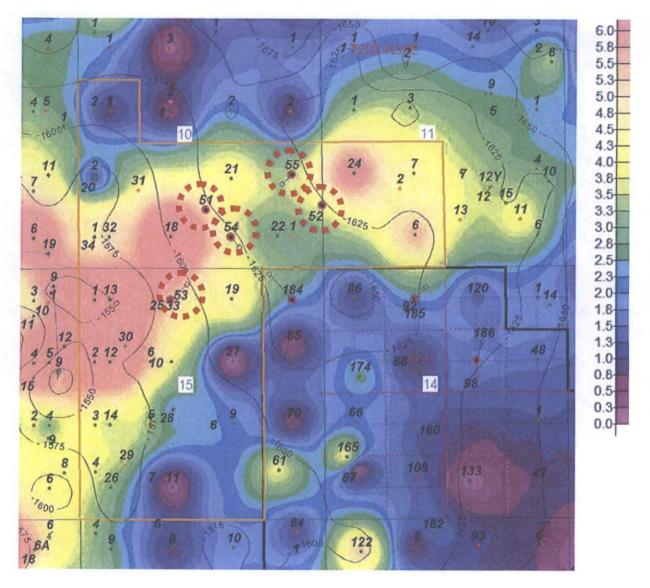
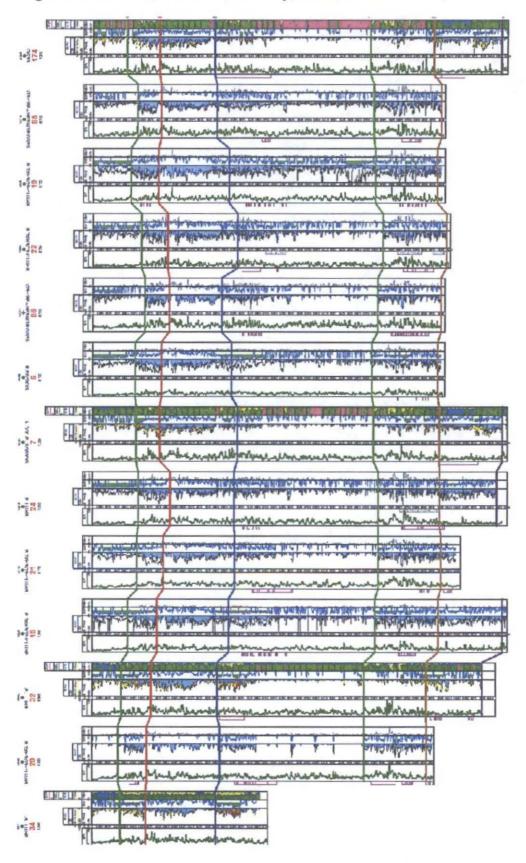


Figure 4: Glorieta, Paddock, Blinebry, Tubb, Drinkard cross-section



# Appendix A

Table 1: Blinebry/Tubb/Drinkard standalone economics

	,	Inputs	<del></del>	·	]			Outpu	ts.	
		<u> </u>			]	Discount	Pretax	After Tax		After Tax
Start Da	ste:	1/1/2015	Capital	\$1,800		Rate	NPV [M\$]	NPV [M\$]	Pretax IRR	IRR
Wərkin	ginterest	5-0%	Tax Rate	35%		O%	(622)		-9%	-15%
Net Rev	Interest	43.8%	Gas Tax	7.5%	ł	<b>8%</b>	(503)			
Oil Priz	æ [5/6H]	\$50	OilTex	4.6%		10%	[827]		ь.	
Gas Pri:	ce [\$ <i>f</i> mcf]	\$3.00	Ad Val Rate	2%		12%	(£45)	(1.024)		
OpEx [\$	/bbl)	\$7			•	15%	(EE4)	(1,025)	1. 1.	
									1 /	
		roduction		Net Produ	etion		P:	rice 📝	Revenue	`
	Oil	Gas		ĐiI	·Gas		Oil	Gas	🦳 SM 📑	<b>~</b> /
'	MBbis	MM:f		MBb1s	MM:F	<del>.</del> .	\$/661	\$/Méf (	/ Total >_	
2015	11.6	65.4		5.1	29.0		500	∕ ,⊒.0\	/ ( 340√ ·	
2016	E.E	50.4		3.6	22.1		50.0	₹ 3.0	258	
2017	5.9	34.1		2.6	14.9		/ <b>50</b> .0	3.0	175	
201E	4.4	25.0		19	10.9		\$500 (	3.0	128	
2019	3.4	193		15	85		50.0 50.0	√ 3.0 ~ "	/ 99	
2020	2.7	15.5		1.2	6.E	~	-	`3.0	80	
2021	2.2	12.8		1.0	5.6	1.	50.0	``\_3.0 '	€5	
2022	1.9	10.8		9.0	4.7	_ \H_	50.0	3.0	55	
2023	1.6	9.2		0.7	4.0	1	50.0	3.0	47	
2024	1.4	8.0		0.5	3.5	The state of	50.0	3.0	41	
2025	1.2	7.0		0.5	3.1 / 1	mer sal	50.0	3.0	36	
2026	1.1	6.3		0.5	2.7 - 7	2/~	50.0	3.0	32	
2027	1.0	5.6		04/	25\_/		50.0	3.0	29	
2028	0.9	5.1		0.4	2.0	$C_{ij}J_{ij}J_{ij}$	50.0	3.0	26	
2029	0.8	4.6		0.4			50.0	3.0	24	
Total	54.3	311.4		23.7 · · ·	- <u>136.2</u>		····		1,596	
	<del></del>			1 1	<del>- } \[ \] \</del>	:			Cum Ca:	sh Flow
	n 1-						_			
	Prod Tax [M\$E A	d Val Tax [M\$)	Operating ( Costs [M\$]	Uperating CF	СарЕх	Pre Tax CF [M\$]	Taxes [M\$]	After Tax CF [M\$]	Pre Tax [M\$]	After Tax [M\$)
2015	1E	7	36√√ `	279	1,800	-1,521	0	-1521	-1521	-1521
2016	14	5		212	0	212	<sup>7</sup> 74	138	<b>-130</b> 9	-1383
2017	9	3	/ -19	143	0	143	50	93	-1166	-1290
2018	7	3 /	( 14 )	105	0	105	37	68	-1051	-1222
2019	5	2	111	81	0	81	28	53	-979	-1169
2020	4	2	<b>8</b> ,	65	0	65	23	42	-914	-1126
2921	4	1	<u> </u>	54	0	54	19	35	-860	-1091
2022	. 3	(1/ ).	ε.	45	O	45	16	25	<b>-815</b>	-1062
2023	3	( <b>1</b>	, 5	39	0	39	14	25	-776	-1037
2024	2 7		, 4	34	0	34	12	22	-742	-1015
2025	/2/-/	1	<b>4</b>	30	0	30	10	19	-713	-996
2925	( <b>2</b> (	$\langle \cdot \rangle$	3	26	0	26	9	17	-686	-978
2927	2	1	3	24	0	24	. B	15	-6-63	-963
2028	<b>12</b>	J 1	3	21	0	21	. 7	14	-641	-949
2029	£ ~	<u>// /0</u>	2	19	0	19	7	13	-622	-937
Tetal	£5 🔨	JP 32	170	1,309	1,800	-491	361	-851		

### **Preliminary Field Study Results**

The last drilling program in this part of SEMU that targeted the Blinebry, Tubb, and Drinkard was generally uneconomic, with the exception being SEMU 174 that had an IP of 48 BOPD and 273 MCFD. This will add an incremental 55 MBO and 310 MMCF per well. The gas curve is based on a GOR of ~5.7 MCF/STB (see Figures 5 and 6).

SEMU 174 had the best reservoir quality compared to the other wells in its program, as shown by logs. The Britt-B area tends to be of higher or comparable reservoir quality to SEMU 174. For this reason in conjunction of a modern completion design, the Blinebry/Tubb/Drinkard type-curve was chosen to be based on the performance of SEMU 174. The 40-acre Original Oil In Place (OOIP) for the Blinebry/Tubb/Drinkard in the Britt-B lease was calculated to be 3.3 MBO.

## **Justification for Commingle Proposal**

At current commodity prices, the estimated production (type curve) from the BTD in these wells is not sufficient to pay off the costs of a drilling program to this depth. With some successes being shown in the offsetting wells, in regards to producing the Glorieta and downhole commingling it with the Blinebry/Tubb/Drinkard, an uplift of 45 BOPD and 6 MCFD in the IP rate is expected (Figure 7). This will add an incremental 110 MBO and 14 MMCF per well.

The production curve is based on the production from wells inside and immediately surrounding the Britt-B lease (see Figure 1). The oil curve is based on an average of the IP rates and the decline rates of the wells. The gas curve is based on a GOR of 0.13 MCF/STB taken from the Britt-B #34, the only Glorieta only producer in the lease.

The reservoir quality for the Glorieta in the Britt-B area is comparable to the offsetting Glorieta producers. The P50<sup>‡</sup> 40-acre OOIP for the Glorieta producers was found to be ~1.1MMBO; there is confidence that the Glorieta will be a major production contributor. For convenience we include the BLM Downhole Commingle Worksheet.

<sup>&</sup>lt;sup>‡</sup> P50 refers to an estimate with 50% certainty.

# **Supporting Details**

Figure 5: Weir-Blinebry/Weir-Blinebry East/Monument-Tubb/Skaggs-Drinkard type curve

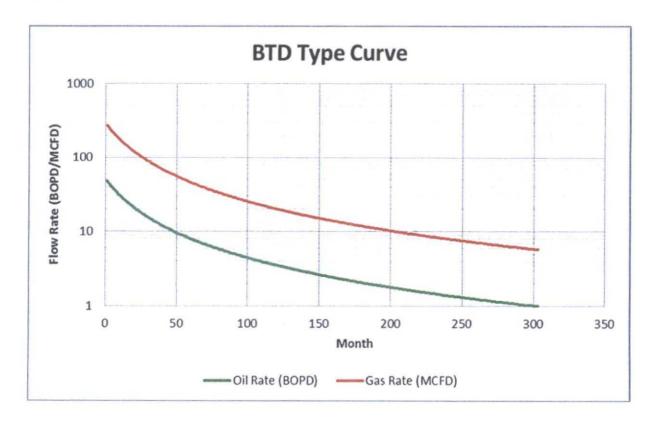


Figure 6: Type curve with SEMU 174 actual well test data

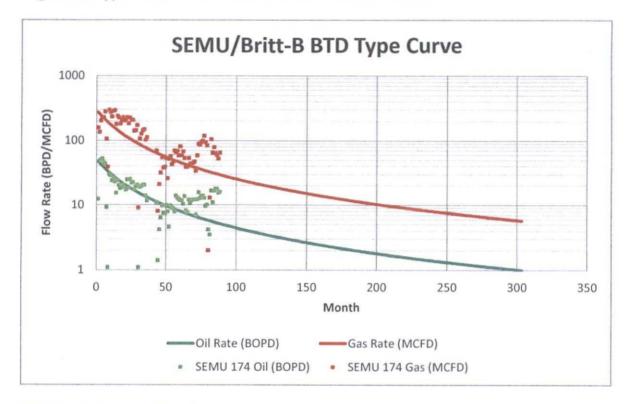


Figure 7: Skaggs-Glorieta type curve.

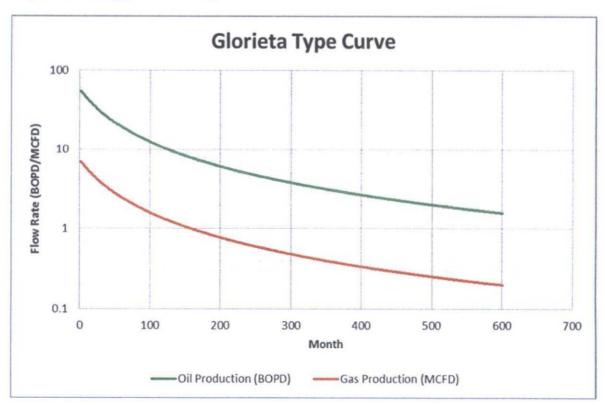
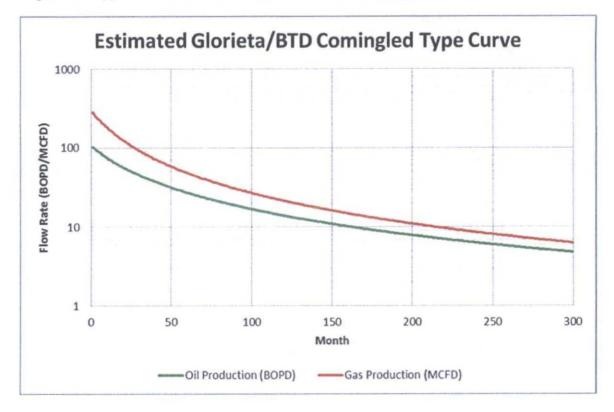


Figure 8: Type curve of Glorieta and BTD commingling





# www.permianls.com

# 575.397.3713 2609 W Marland Hobbs NM 88240

For:

ConocoPhillips

Attention: Vernon Mackey

1410 W. County Road

Hobbs, New Mexico 88240

Sample: Identification:

Company:

Lease: Plant:

Sample Data:

Date Sampled

2/18/2014 12:52 PM

2/19/2014 Analysis Date

35 Pressure-PSIA Sample Temp F

83 Atmos Temp F

Sampled by:

Logan Mcllroy Vicki McDaniel

Meter Run

Britt B #34

ConocoPhillips

Analysis by:

H2S =

4,500 PPM

### Component Analysis

		Mol	GPM
		Percent	
Hydrogen Sulfide	H2S	0.450	
Nitrogen	N2	2.639	
Carbon Dioxide	CO2	1.329	
Methane	C1	74.780	
Ethane	C2	10.706	2.856
Propane	СЗ	5.398	1.483
I-Butane	IC4	0.7 <b>79</b>	0.254
N-Butane	NC4	1.919	0.604
I-Pentane	IC5	0.583	0.213
N-Pentane	NC5	0.628	0.227
Hexanes Plus	C6+	0.789	0.342
		100,000	5.978

REAL BTU/CU.FT.		Specific Gravity	
At 14.65 DRY	1261.3	Calculated	0.7683
At 14.65 WET	1239.3		
At 14.696 DRY	1265.2		
At 14.696 WET	1243.7	Molecular Weight	22.2509
At 14.73 DRY	1268.1		
At 14.73 Wet	1246.3		



### www.permianls.com 575.397.3713 2609 W Marland Hobbs NM 88240

### **ASTM DISTILLATION**

ConocoPhillips Attention: Vernon Mackey 1410 W. County Road Hobbs, New Mexico 88240

Sampled By: Logan McIlroy Sample Date: 2/18/14

Sample ID: Britt B #34

Percent Distilled	<u>Temperature</u>		
IBP	125		
5	165		
10	202		
20	261	%Recovered =	93.0
30	327	% Residue =	4.0
40	435	% Loss =	3.0
50	515		
60	610		
70	693		
80	738		
90	761		
FP	765		

Total Sulfur	API Gravity	Specific Gravity
0.6484 wt.%	39.3	0.8284



## www.permianls.com

## 575.397.3713 2609 W Marland Hobbs NM 88240

For:

ConocoPhillips

Attention: Vernon Mackey 1410 W. County Road

Hobbs, New Mexico 88240

Sample:

Identification:

Company: Lease:

Plant:

Casing

**SEMU 174** ConocoPhillips

Sample Data:

Date Sampled

2/18/2014 11:58 AM

Analysis Date

2/19/2014

Sampled by: Analysis by:

Logan McIlroy Vicki McDaniel

Pressure-PSIA Sample Temp F Atmos Temp F

83

H2S =

4,400 PPM

### Component Analysis

		Mol	GPM
		Percent	
Hydrogen Sulfide	H2S	0.440	
Nitrogen	N2	2.604	
Carbon Dioxide	CO2	0.618	
Methane	C1	75.574	
Ethane	C2	9.514	2.538
Propane	C3	5.478	1.505
I-Butane	IC4	0.754	0.246
N-Butane	NC4	2.143	0.674
I-Pentane	IC5	0.602	0.220
N-Pentane	NC5	0.815	0.295
Hexanes Plus	C6+	<u>1.458</u>	<u>0.631</u>
		100.000	6.108

REAL BTU/CU.FT.		Specific Gravity	
At 14.65 DRY	1299.6	Calculated	0.7809
At 14.65 WET	1276.9		
At 14.696 DRY	1303.6		
At 14.696 WET	1281.4	Molecular Weight	22.6163
At 14.73 DRY	1306.6		
At 14.73 Wet	1284.0		



# www.permianls.com 575.397.3713 2609 W Marland Hobbs NM 88240

### **ASTM DISTILLATION**

ConocoPhillips Attention: Vernon Mackey 1410 W. County Road Hobbs, New Mexico 88240

Sampled By: Logan McIlroy Sample Date: 2/18/14

Sample ID: SEMU 174

Percent Distilled	<u>Temperature</u>		
IBP	130		
. 5	180		
10	215		
20	280	%Recovered =	94.0
30	345	% Residue =	4.0
40	445	% Loss =	2.0
50	536		
60	617		
70	680		
80	703		
90 .	738		
EP	741		

Total Sulfur	API Gravity	Specific Gravity
0.3688 wt.%	39.4	0.8279

# NALCO Champion Water Analysis Report

An Ecolab Company

Attention: Anthony.baeza@champ-tech.com

Location Code: 23130 Sample ID: AB42153

Login Batch: 2014-02-24\_MFA\_SWICPW

Collection Date: **02/19/2014**Receive Date: **02/24/2014**Report Date: **03/03/2014** 

Customer: ConocoPhillips (1500390)

Region: Eunice Field
Location: Britt B Lease
System: Production System

Equipment: Well 34 Lab ID: ABU-1031

Sample Point: Well Head Valve Up Stream of Choke

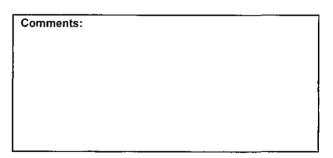
Analyses	Result	Unit
Dissolved CO2	50	mg/L
Dissolved H2S	188.1	mg/L
Нq	8	
Pressure	70	psi
Temperature	83	٥F

Analyses	Result	Unit
Bicarbonate	634.4	mg/L
Conductivity	130163	μ\$ - cm3
Ionic Strength	1.47	
Resistivity	0.077	ohms - m
Specfic Gravity	1.055	
Total Dissolved Solids	83304.07	mg/L

Cations	Result	Unit
Iron	0.038	mg/L
Manganese	0.013	mg/L
Barium	0.056	mg/L
Strontium	66.68	mg/L
Calcium	2657	mg/L
Magnesium	804.1	mg/L
Sodium	28272.82	mg/L

Anions	Result	Unit
CHLORIDE	48988.96	mg/L
SULFATE	1880	mg/L

Scale Type	Result
Anhydrite Ca\$O4 \$I	-0.52
Barite BaSO4 SI	-0.53
Calcite CaCO3 PTB	263.3
Calcite CaCO3 SI	1.17
Celestite SrSO4 SI	-0.07
Gypsum CaSO4 SI	-0.35
Hemihydrate CaSO4 St	-0.35
Saturation Index Calculation (Tomso	n-Oddo Model)



02/19/2015 · Page Lof L

This document contains the confidential and/or proprietary Information of NALCO Champion. The recipient agrees to maintain the confidentiality of the terms of this document, and shall not reproduce it by any means, disclose the contents of it to any third party, or use the contents of it for any purpose other than the purpose for which it was intended by NALCO Champion.

# NALCO Champion Water Analysis Report

An Ecolab Company

Attention: Anthony.baeza@champ-tech.com

Customer: ConocoPhillips (1500390)

Location Code: 23299 Sample ID: AB42154

Login Batch: 2014-02-24\_MFA\_SWICPW

Collection Date: 02/19/2014

Receive Date: 02/24/2014

Report Date: 03/03/2014

Region: Eunice Field

Location: **SEMU Tubb Lease**System: **Production System** 

Equipment: Well 174 Lab ID: ABU-1031

Sample Point: Well Head Valve Up Stream of Choke

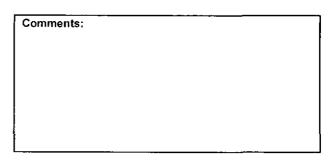
Analyses	Result	Unit
Dissolved CO2	50	mg/L
Dissolved H2S	119.7	mg/L
рН	8	
Pressure	100	psi
Temperature	81	۰F

Analyses	Result	Unit
Bicarbonate	475.8	mg/L
Conductivity	187614	μS - cm3
Ionic Strength	2.13	
Resistivity	0.053	ohms - m
Specfic Gravity	1.082	
Total Dissolved Solids	120073.1	mg/L

Cations	Result	Unit
Iron	0.082	mg/L
Manganese	0.044	mg/L
Barium	0.078	mg/L
Strontium	95.58	mg/L
Calcium	3793	mg/L
Magnesium	1040	mg/L
Sodium	41169.79	mg/L

Anions	Result	Vnit
CHLORIDE	71983.77	mg/L
SULFATE	1515	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	-0.46
Barite Ba\$O4 SI	-0.55
Calcite CaCO3 PTB	195.3
Calcite CaCO3 St	1,12
Celestite SrSO4 SI	-0.05
Gypsum CaSO4 SI	-0.34
Hemihydrate CaSO4 SI	-0.38
Saturation Index Calculation (Tomso	n-Oddo Model)



02/19/2015 Page 1 of 1

This accument contains the confidential and/or proprietary information of NALCO Champion. The recipient agrees to maintain the confidentiality of the terms of this document, and shall not reacoduce it by any means, disclose the contents of it to any third party, or use the contents of it for any purpose other than the purpose for which it was intended by NALCO Champion.

# NALCO Champion Water Analysis Report

An Ecolab Company

Attention:Anthony.baeza@champ-tech.com

Location Code: 23130 Sample ID: AB42153

Login Batch: 2014-02-24\_MFA\_SWICPW

Collection Date: **02/19/2014**Receive Date: **02/24/2014**Report Date: **03/03/2014** 

Customer: ConocoPhillips (1500390)

Region: Eunice Field Location: Britt B Lease System: Production System

Equipment: Well 34
Lab ID: ABU-1031

Sample Point: Well Head Valve Up Stream of Choke

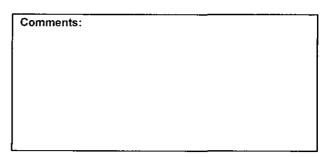
Analyses	Result	Unit
Dissolved CO2	50	mg/L
Dissolved H2S	188.1	mg/L
рН	8	
Pressure	70	psi
Temperature	83	٥٤

Analyses	Result	Unit
Bicarbonate	634.4	mg/L
Conductivity	130163	μS - cm3
Ionic Strength	1.47	
Resistivity	0.077	ohms - m
Specfic Gravity	1.055	
Total Dissolved Solids	83304.07	mg/L

Cations	Result	Unit
Iron	0.038	mg/L
Manganese	0.013	mg/L
Barium	0.056	mg/L
Strontium	66.68	mg/L
Calcium	2657	mg/L
Magnesium	804.1	mg/L
Sodium	28272.82	mg/L

Anions	Result	Unit
CHLORIDE	48988.96	mg/L
SULFATE	1880	mg/L

Scale Type	Result
Anhydrite Ca\$O4 SI	-0.52
Barite BaSO4 SI	-0.53
Calcite CaCO3 PTB	263.3
Calcite CaCO3 \$1	1.17
Celestite SrSO4 SI	-0.07
Gypsum CaSO4 SI	-0.35
Hemihydrate CaSO4 SI	-0.35
Saturation Index Calculation (Tomso	n-Oddo Model)



This document contains the confidential and/or proprietary information of NALCO Champion. The recipient agrees to maintain the confidentiality of the terms of this document, and shall not reproduce it by any means, also the contents of it to any third party, or use the contents of it for any purpose other than the purpose for which it was intended by NALCO Champion.

02/19/2015 Page ! of 1



Michael Fitzgerald SE New Mexico Permian

ConocoPhillips Company 600 N. Dairy Ashford P10-05-5055 Houston, TX 77079

Phone: 281-206-5684 Michael.d.fitzgerald@cop.com

June 9, 2015

RE: Downhole Commingling Application

Township 20 South, Range 37 East, N.M.P.M.

Section 10: SW/4 SE4 and E/2 SE/4

Section 15: NE/4 NW/4

Containing 160.00 acres, more or less Lea County, New Mexico

ConocoPhillips Company, as operator of the Britt-B Lease, is seeking approval to downhole commingle the wells referenced herein. (See attached map for specific locations).

Britt-B wells numbered 51, 52, 53, 54, and 55 are all located on the Britt-B Federal Lease (NMLC-031621B).

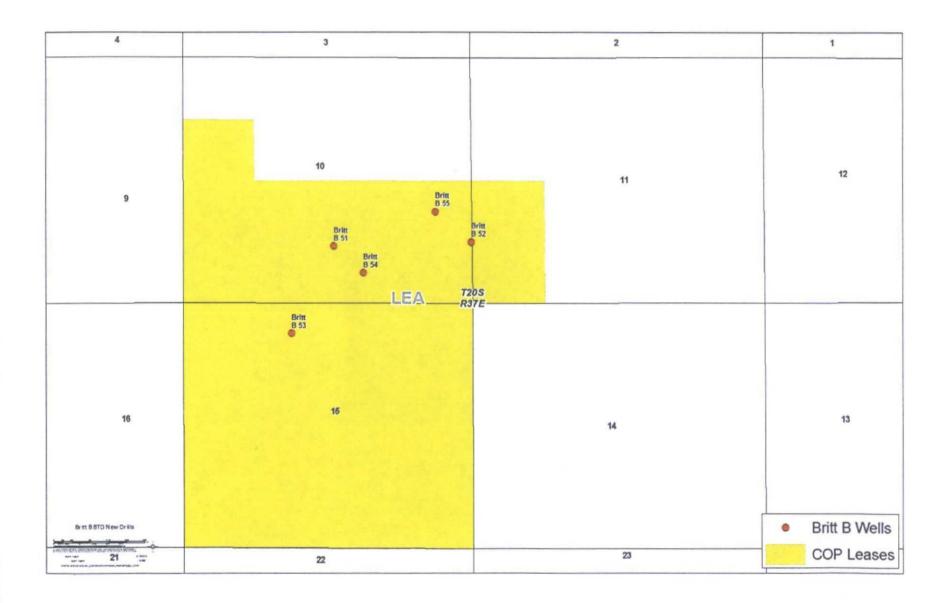
Interest Owner	Working <u>Interest</u>	Net Revenue Interest
ConocoPhillips Company	50.000%	43.750%
Chevron USA Inc.	25.000%	21.875%
ZPZ Delaware LLC	25.000%	21.875%
Office of Natural Resource Revenue	00.000%	12.500%
Total	100.000%	100.00%

I certify that the above information is true and correct.

Michael Fitzgerald

Associate Landman

ConocoPhillips Company





ConocoPhillips Company P.O. Box 51810 Midland, TX 79710-1810

July 20, 2015

Chevron USA Inc. 15 Smith Rd, Claydesta Plaza Midland, TX 79705



SUBJECT: REQUEST FOR APPROVAL OF DOWNHOLE COMMINGLE FOR BRITT B LEASE

To Whom It May Concern:

ConocoPhillips Company is requesting an approval to Downhole Commingle the Skaggs-Glorieta Pool (57190) with the pre-approved pools Weir-Blinebry (63780), Weir-Blinebry East (63800), Monument-Tubb (47090), and Skaggs-Drinkard (57000) pools in ConocoPhillips' Blinebry, Tubb, Drinkard development program in Sections 10 and 15, T20S, R37E, Lea County, New Mexico.

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 any questions regarding this request, I can be reached at 432-688-6938 or via email at ashley.bergen@cop.com

Sincerely,

Ashley Bergen

Regulatory Specialist



ConocoPhillips Company P.O. Box 51810 Midland, TX 79710-1810

July 20, 2015

ZPZ Delaware LLC 303 Veterans Airpark Lane Midland, TX 79705



SUBJECT: REQUEST FOR APPROVAL OF DOWNHOLE COMMINGLE FOR BRITT B LEASE

#### To Whom It May Concern:

ConocoPhillips Company is requesting an approval to Downhole Commingle the Skaggs-Glorieta Pool (57190) with the pre-approved pools Weir-Blinebry (63780), Weir-Blinebry East (63800), Monument-Tubb (47090), and Skaggs-Drinkard (57000) pools in ConocoPhillips' Blinebry, Tubb, Drinkard development program in Sections 10 and 15, T20S, R37E, Lea County, New Mexico.

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 any questions regarding this request, I can be reached at 432-688-6938 or via email at ashley.bergen@cop.com

Sincerely,

Ashley Bergen

Regulatory Specialist



ConocoPhillips Company P.O. Box 51810 Midland, TX 79710-1810

July 20, 2015

Office of Natural Resource Revenue Room A 614 Building 85 Denver Federal Center (6<sup>th</sup> Kipling) Denver, CO 80225



SUBJECT: REQUEST FOR APPROVAL OF DOWNHOLE COMMINGLE FOR BRITT B LEASE.

To Whom It May Concern:

ConocoPhillips Company is requesting an approval to Downhole Commingle the Skaggs-Glorieta Pool (57190) with the pre-approved pools Weir-Blinebry (63780), Weir-Blinebry East (63800), Monument-Tubb (47090), and Skaggs-Drinkard (57000) pools in ConocoPhillips' Blinebry, Tubb, Drinkard development program in Sections 10 and 15, T20S, R37E, Lea County, New Mexico.

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 any questions regarding this request, I can be reached at 432-688-6938 or via email at ashley.bergen@cop.com

- Bergen

Sincerely,

Ashley Bergen

Regulatory Specialist

□ Complete items 1, 2, and 3. Also complete A. Signature ☐ Agent item 4 if Restricted Delivery is desired. X ☐ Addressee Print your name and address on the reverse so that we can return the card to you. B. Received by (Printed Name) C. Date of Delivery □ Attach this card to the back of the mailpiece, or on the front if space permits. 1. Article Addressed to: If YES, enter delivery address below: Office of Natural RESOUTCE REVENUE ROWM A WITH Building 85, Denver Federal 3. Service Type Certified Mail® ☐ Priority Mail Express™ Registered Return Receipt for Merchandise benver, co, 80225 Insured Malf ☐ Collect on Delivery 4. Restricted Delivery? (Extra Fee) Yes 2. Article Number 7013 3020 0001 2047 9999 (Transfer from service label) PS Form 3811, July 2013 Domestic Return Receipt U.S. Postal Sarvicem CERTIFIED MAIL RECEIPT 9999 Ū 2047 2042 Certified Fee 1000 Postmark Return Receipt Fee (Endorsement Required) Here Restricted Delivery Fee (Endorsement Regulred) 3020 3020 Total Postage & Fees 7013 f Natural Resolu City, State, ZIP+4 BUTTB F860m8800, August 2006 ScoReverse for Instruct