06-4-2014 | MCLANAHAN | 06/11/2014 | NSL | PEH 1416232085

06-05-2014 DATE IN	SUSPENSE	PG R ENGINEER	06/06/2014 LOGGED IN	DHC TYPE	PEH 1415740654 APP NO

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

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

NSL 6528-1
DHC
ConocoPhillips Company
Ruby FEDERAL #2
30-025-40394

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
[X] NSL [ ] NSP [ ] SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
Ruby Federal #2 - API #30-025-40394
[X] DHC [ ] CTB [ ] PLC [ ] PC [ ] OLS [ ] OLM

Pool 44500
Maljamar; Yeso West
Maljamar; Grayburg San Andres
43329

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
[ ] WFX [ ] PMX [ ] SWD [ ] IPI [ ] EOR [ ] PPR

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply

[A] [ ] Working, Royalty or Overriding Royalty Interest Owners

[B] [ ] Offset Operators, Leaseholders or Surface Owner

[C] [ ] Application is One Which Requires Published Legal Notice

[D] [X] 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] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Susan B. Maunder	Susan B. Maunder	Sr. Regulatory Specialist	6/3/14
Print or Type Name	Signature	Title	Date

Susan.B.Maunder@conocophillips.com
e-mail Address

District I
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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-40394	44500	Maljamar; Yeso West

[4] Property Code	[5] Property Name	[6] Well Number
38653	Ruby Federal	2

[7] OGRID No.	[8] Operator Name	[9] Elevation
217817	ConocoPhillips Company	4004'

[10] Surface Location

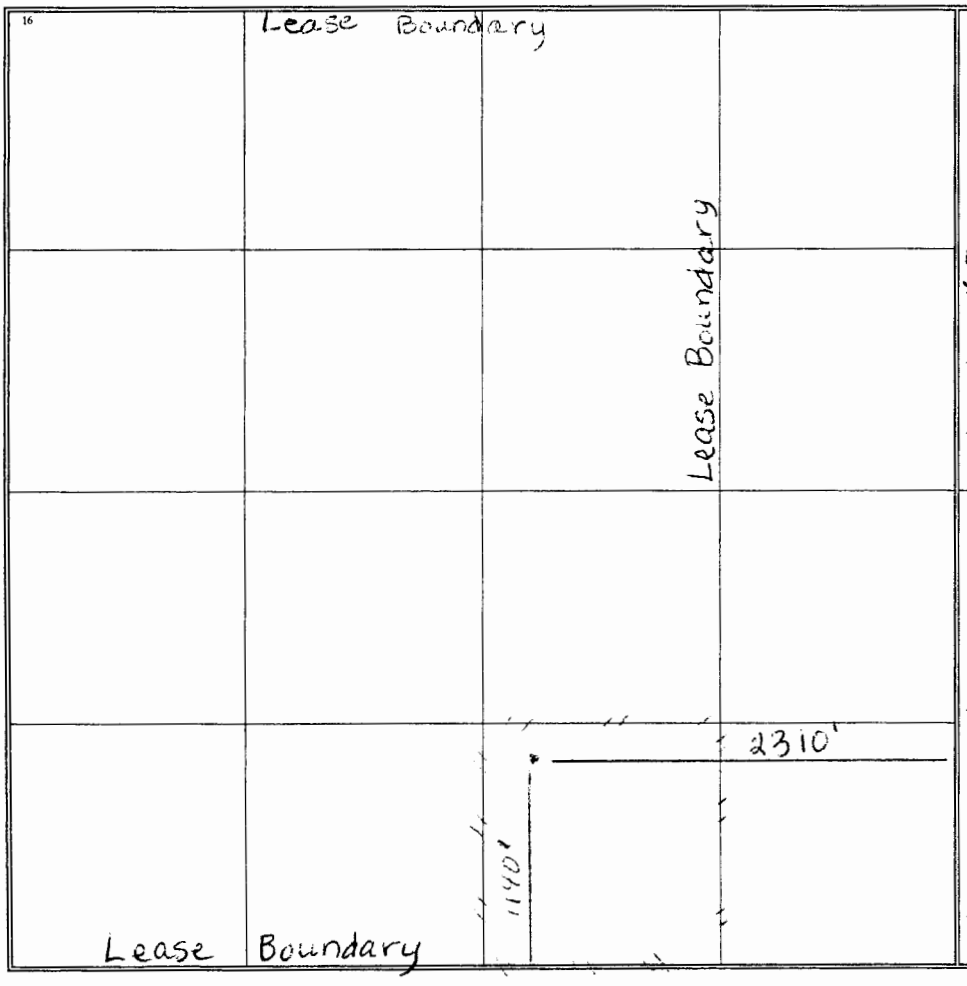
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	17	17S	32E		1140'	South	2310'	East	Lea

[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	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
40			DHC - 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.



[17] 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 hole 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.

Susan B. Maunder 5/30/14
Signature Date

Susan B. Maunder
Printed Name

Susan.B.Maunder@conocophillips.com
E-mail Address

[18] 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.

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number

District I
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
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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

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-40394	43329	Maljamar; Grayburg, San Andres

[4] Property Code	[5] Property Name	[6] Well Number
	Ruby Federal	2

[7] OGRID No.	[8] Operator Name	[9] Elevation
217817	ConocoPhillips Company	4004'

[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
O	17	17S	32E		1140'	South	2310'	East	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	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
40			DHC - 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.

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Susan B. Maunder 5/30/14
Signature Date

Susan B. Maunder
Printed Name

Susan.B.Maunder@conocophillips.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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Certificate Number

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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

X APPLICATION TYPE
___ Single Well
___ Establish Pre-Approved Pools
EXISTING WELLBORE
X Yes ___ No

APPLICATION FOR DOWNHOLE COMMINGLING

ConocoPhillips Company — 600 N. Dairy Ashford Rd, Off P10-3-3096; Houston, TX 77079-1175
Operator — Address

Ruby Federal — 2 — UL O-Sec. 17 -T17S-R32E — Lea
Lease — Well No. — Unit Letter-Section-Township-Range — County

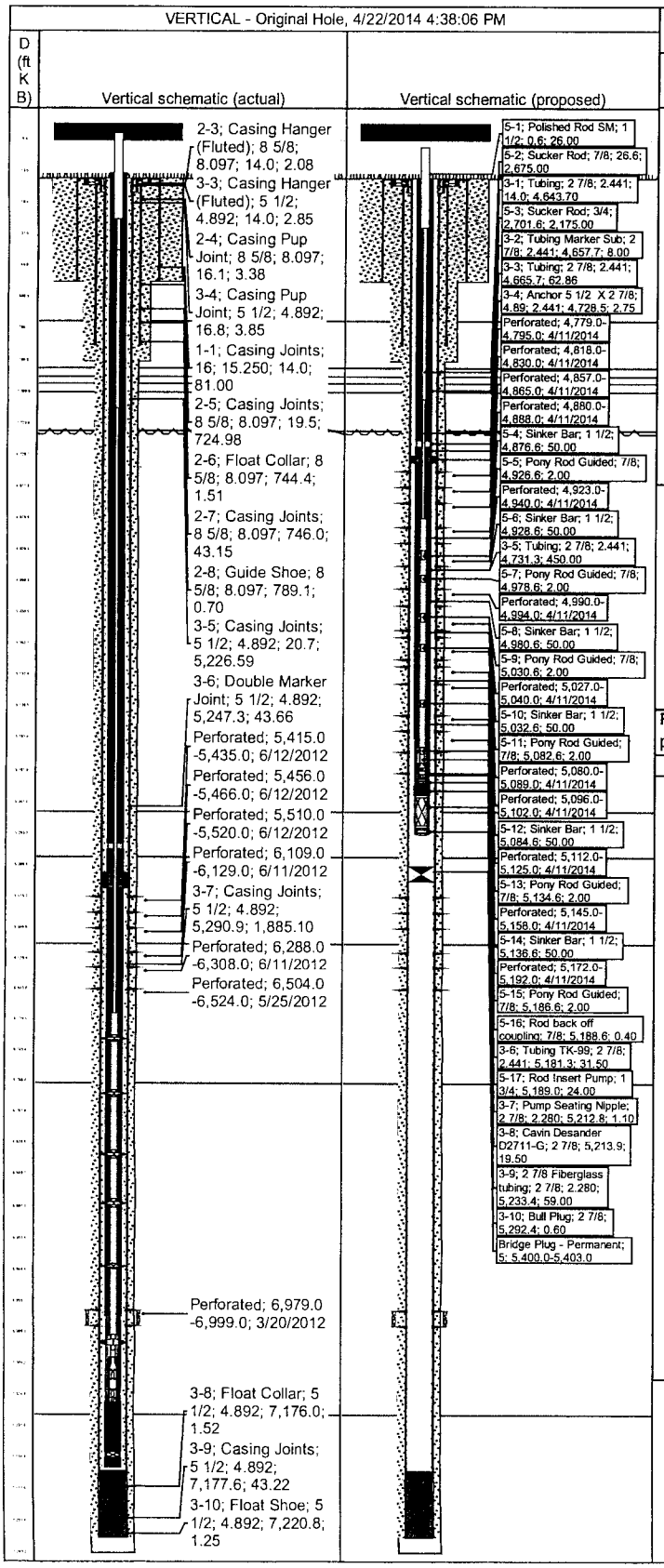
OGRID No. 217817 Property Code 38653 API No. 30-025-40394 Lease Type: X Federal ___ State ___ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Maljamar; Grayburg, San Andres	N/A	Maljamar; Yeso West
Pool Code	43329	N/A	44500
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	4779' - 5192' perforated	N/A	5415' - 6999' perforated
Method of Production (Flowing or Artificial Lift)	Artificial	N/A	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)	Pi,r = 1733	N/A	Pi,r = 2600
Oil Gravity or Gas BTU (Degree API or Gas BTU)	38.1	N/A	38.2
Producing, Shut-In or New Zone	New	N/A	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: estimate Rates: 20/50/100	Date: Rates: N/A	Date: 04/08/2014 Rates: 8/4/171
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil 42 % Gas 19 %	Oil 0 % Gas 0 %	Oil 58 % Gas 81 %

ADDITIONAL DATA

... identical in all commingled zones? Yes X No

Proposed Rod and Tubing Configuration
RUBY FEDERAL 02



Tubing Description — proposed Tubing - Production — **Set Depth (ftKB)** 5,293.0

Jts	Item Des	OD Nominal (in)	Nominal ID (in)	Wt (lb/ft)	Grade	Len (ft)	Btm (ftKB)
147	Tubing	2 7/8	2.441	6.50	J-55	4,643.70	4,657.7
1	Tubing Marker Sub	2 7/8	2.441	6.50	J-55	8.00	4,665.7
2	Tubing	2 7/8	2.441	6.50	J-55	62.86	4,728.5
1	Anchor 5 1/2 X 2 7/8	4.89	2.441			2.75	4,731.3
14	Tubing	2 7/8	2.441	6.50	J-55	450.00	5,181.3
1	Tubing TK-99	2 7/8	2.441	6.50	J-55	31.50	5,212.8
1	Pump Seating Nipple	2 7/8	2.280			1.10	5,213.9
1	Cavin Desander D2711-G	2 7/8				19.50	5,233.4
2	2 7/8 Fiberglass tubing	2 7/8	2.280			59.00	5,292.4
1	Bull Plug	2 7/8				0.60	5,293.0

Rod Description — proposed Rod — **Set Depth (ftKB)** 5,213.0

Jts	Item Des	OD (in)	API Grade	Len (ft)	Btm (ftKB)
1	Polished Rod SM	1 1/2		26.00	26.6
107	Sucker Rod	7/8	SPCL APP	2,675.00	2,701.6
87	Sucker Rod	3/4	SPCL APP	2,175.00	4,876.6
2	Sinker Bar	1 1/2	C	50.00	4,926.6
1	Pony Rod Guided	7/8	D	2.00	4,928.6
2	Sinker Bar	1 1/2	C	50.00	4,978.6
1	Pony Rod Guided	7/8	D	2.00	4,980.6
2	Sinker Bar	1 1/2	C	50.00	5,030.6
1	Pony Rod Guided	7/8	D	2.00	5,032.6
2	Sinker Bar	1 1/2	C	50.00	5,082.6
1	Pony Rod Guided	7/8	D	2.00	5,084.6
2	Sinker Bar	1 1/2	C	50.00	5,134.6
1	Pony Rod Guided	7/8	D	2.00	5,136.6
2	Sinker Bar	1 1/2	C	50.00	5,186.6
1	Pony Rod Guided	7/8	D	2.00	5,188.6
1	Rod back off coupling	7/8		0.40	5,189.0
1	Rod Insert Pump	1 3/4		24.00	5,213.0

Field Study

Maljamar-Yeso West
and
Grayburg-San Andres Pools Commingle

Date: April 23, 2014

ConocoPhillips

Maljamar-Yeso West and Grayburg-San Andres Pool Commingle

Commingle Application

Summary

It is proposed to commingle the Maljamar-Yeso West and Grayburg-San Andres pools in ConocoPhillips Company's (COP) Yeso development program in Sections 17 and 18, 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 commingle 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 (see Figure 7). Yeso development is economic independently. The commingling 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 commingling, 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 Sections 17 and 18, 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 commingling 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 commingling, Yeso and GB/SA will be developed on 20-acre spacing. Oil gravity between the Yeso and GB/SA reservoirs are 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 commingled 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 commingle candidates, Figure 1. Due to the close proximity of these wells, it is believed existing production provides sufficient insight for commingling allocation.

Preliminary Supporting Details

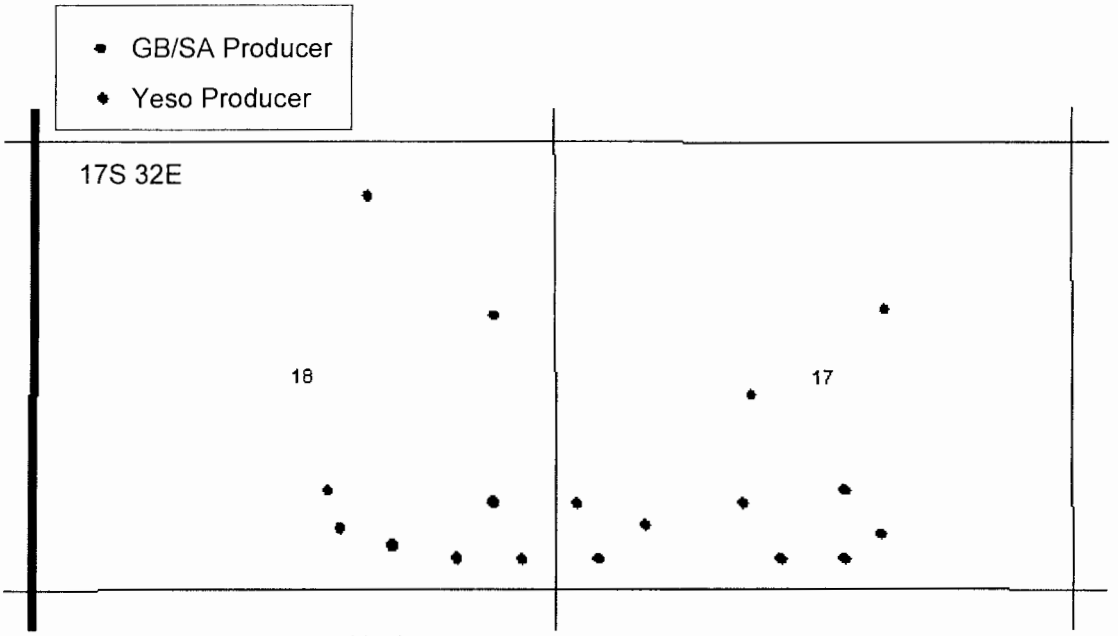


Figure 1: Map of all wells used in the analysis

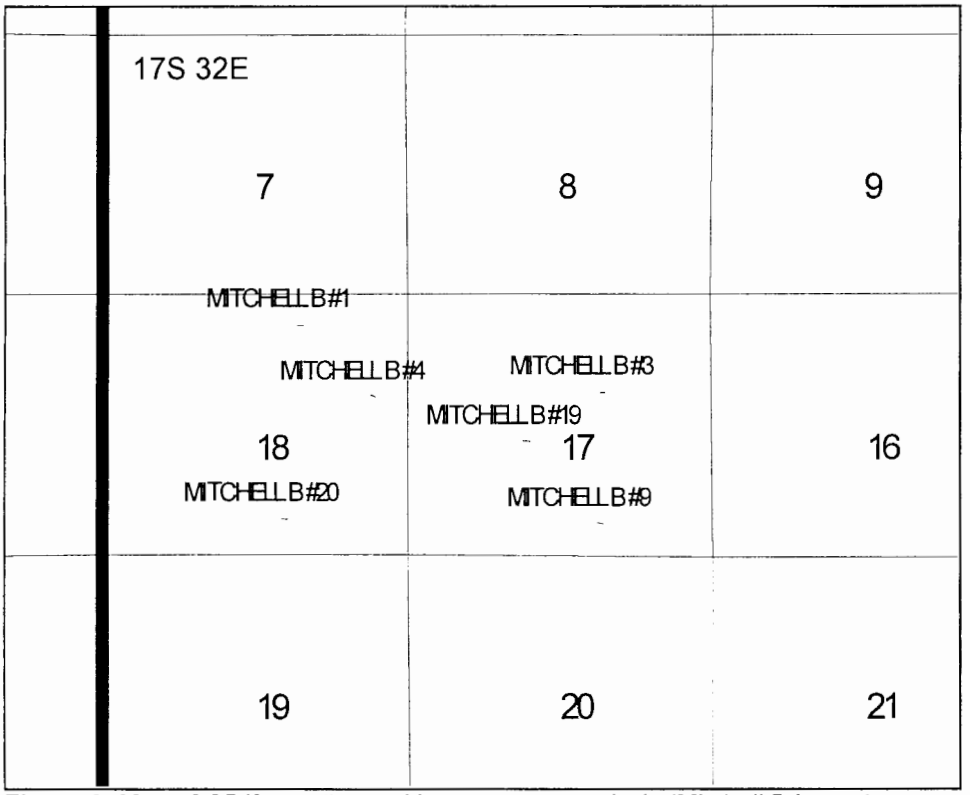


Figure 2: Map of GB/SA wells used in type curve analysis (Mitchell B Lease).

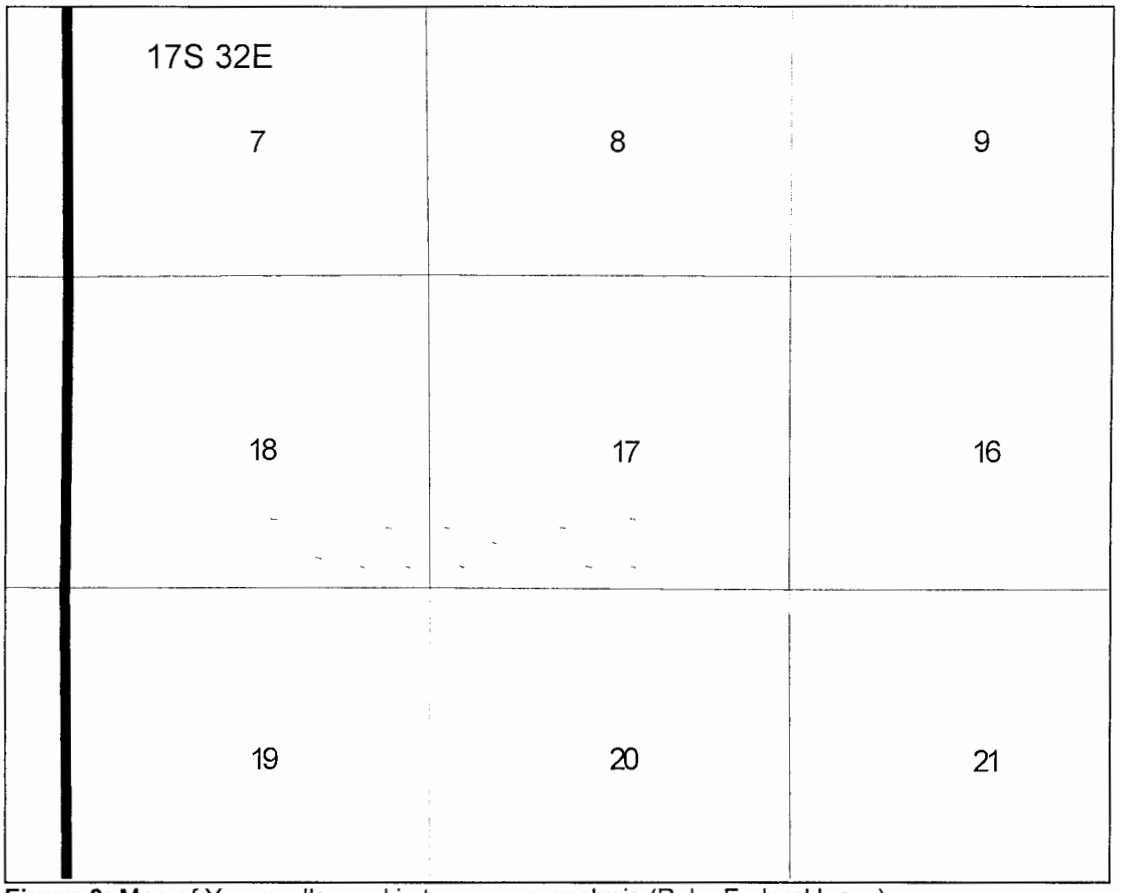


Figure 3: Map of Yeso wells used in type curve analysis (Ruby Federal lease).

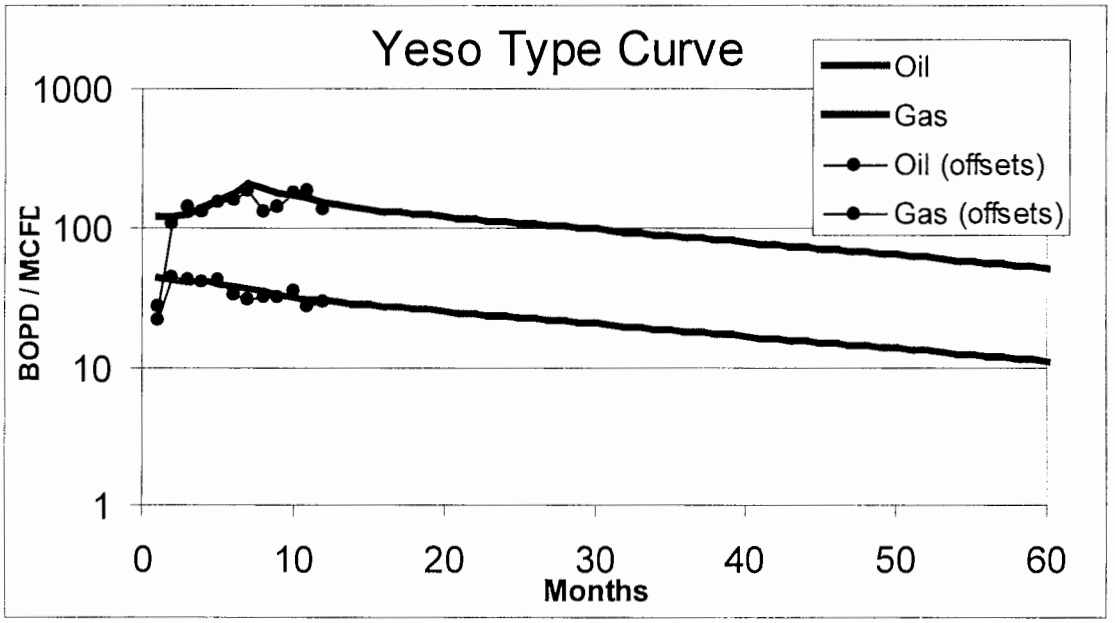


Figure 4: Yeso type curve.

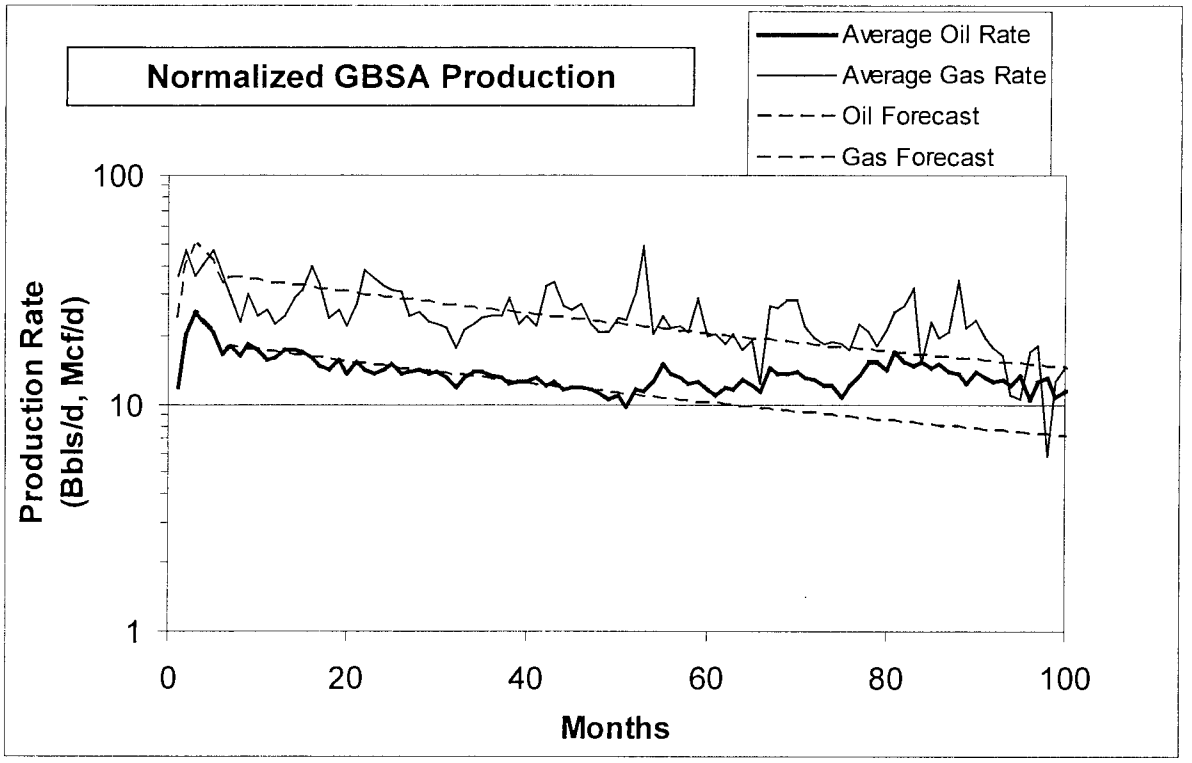


Figure 5: GB/SA type curve

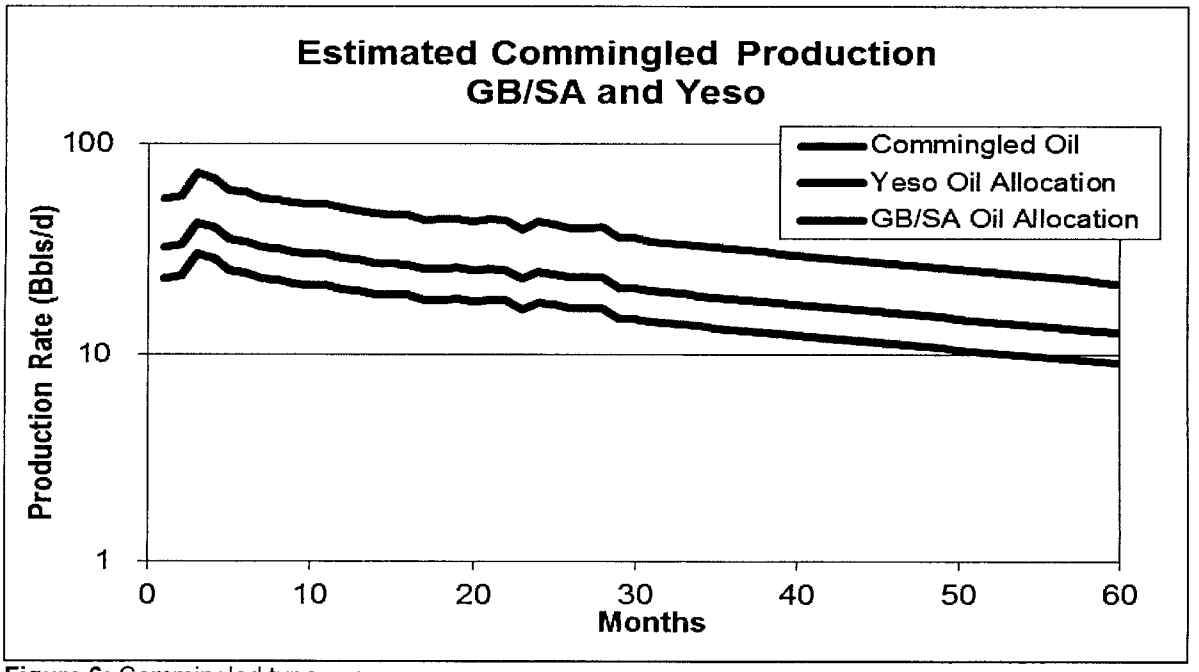


Figure 6: Commingled type curve

Figure 7: Grayburg/San Andres Standalone Economics

Inputs			
Start Date	1/1/2014	Capital	$2,200
Working Interest	100%	Tax Rate	35%
Net Rev Interest	87.5%	Gas Tax	7.5%
Oil Price [$/bbl]	$85	Oil Tax	4.6%
Gas Price [$/mcf]	$4.00	Ad Val Rate	2%
OpEx [$/bbl]	$15		

Outputs				
Discount Rate	Pretax NPV [M$]	After Tax NPV [M$]	Pretax IRR	After Tax IRR
0%	946	(15)	9%	0%
8%	60	(544)		
10%	(74)	(620)		
12%	(186)	(683)		
15%	(321)	(756)		

	Gross Production		Net Production		Price		Revenue
	Oil Bbls	Gas Mcf	Oil Bbls	Gas Mcf	Oil $/bbl	Gas $/Mcf	$M Total
2014	6.5	11.6	5.7	10.2	85.0	4.0	522
2015	6.5	11.7	5.7	10.2	85.0	4.0	524
2016	5.8	10.4	5.0	9.1	85.0	4.0	466
2017	4.7	8.4	4.1	7.4	85.0	4.0	378
2018	4.2	7.5	3.6	6.6	85.0	4.0	336
2019	3.7	6.7	3.3	5.9	85.0	4.0	300
2020	3.3	6.0	2.9	5.2	85.0	4.0	268
2021	3.0	5.4	2.6	4.7	85.0	4.0	240
2022	2.7	4.8	2.3	4.2	85.0	4.0	214
2023	2.4	4.3	2.1	3.7	85.0	4.0	190
2024	2.1	3.8	1.8	3.3	85.0	4.0	170
2025	1.9	3.4	1.7	3.0	85.0	4.0	152
2026	1.7	3.0	1.5	2.6	85.0	4.0	136
2027	1.5	2.7	1.3	2.4	85.0	4.0	121
2028	0.9	1.6	0.8	1.4	85.0	4.0	73
Total	50.7	91.3	44.4	79.9			4,091

	Prod Tax [M$]	Ad Val Tax [M$]	Operating Costs [M$]	Operating CF [M$]	CapEx	Pre Tax CF [M$]	Taxes [M$]	After Tax CF [M$]	Cum Cash Flow Pre Tax [M$]	Cum Cash Flow After Tax [M$]
2014	25	10	85	401	2,200	-1,799	0	-1799	-1799	-1799
2015	25	10	85	403	0	403	141	262	-1395	-1536
2016	22	9	76	358	0	358	125	233	-1037	-1304
2017	18	8	62	291	0	291	102	189	-746	-1115
2018	16	7	55	259	0	259	91	168	-488	-946
2019	14	6	49	231	0	231	81	150	-257	-796
2020	13	5	44	206	0	206	72	134	-51	-663
2021	12	5	39	184	0	184	64	120	133	-543
2022	10	4	35	164	0	164	58	107	298	-436
2023	9	4	31	146	0	146	51	95	444	-341
2024	8	3	28	131	0	131	46	85	575	-256
2025	7	3	25	117	0	117	41	76	692	-179
2026	7	3	22	104	0	104	36	68	797	-112
2027	6	2	20	93	0	93	33	60	890	-51
2028	4	1	12	56	0	56	20	37	946	-15
Total	197	82	666	3,146	2,200	946	961	-15		

Field Study Results

The results from the first 2 recompletions (Ruby Federal #8 & #10) were not conclusive in supporting the current GB/SA type-curve flowstream. The Ruby Federal #10 showed excellent production, exceeding all estimates, while the Ruby Federal #8 initially looked to follow the type curve but fell off of trend after the first month of production. Figure 8 provides production test results and indications of production curves for the two wells in our study. Figure 9 provides additional production data.

Figure 8: GB/SA daily oil production tests compared to GB/SA oil typecurve

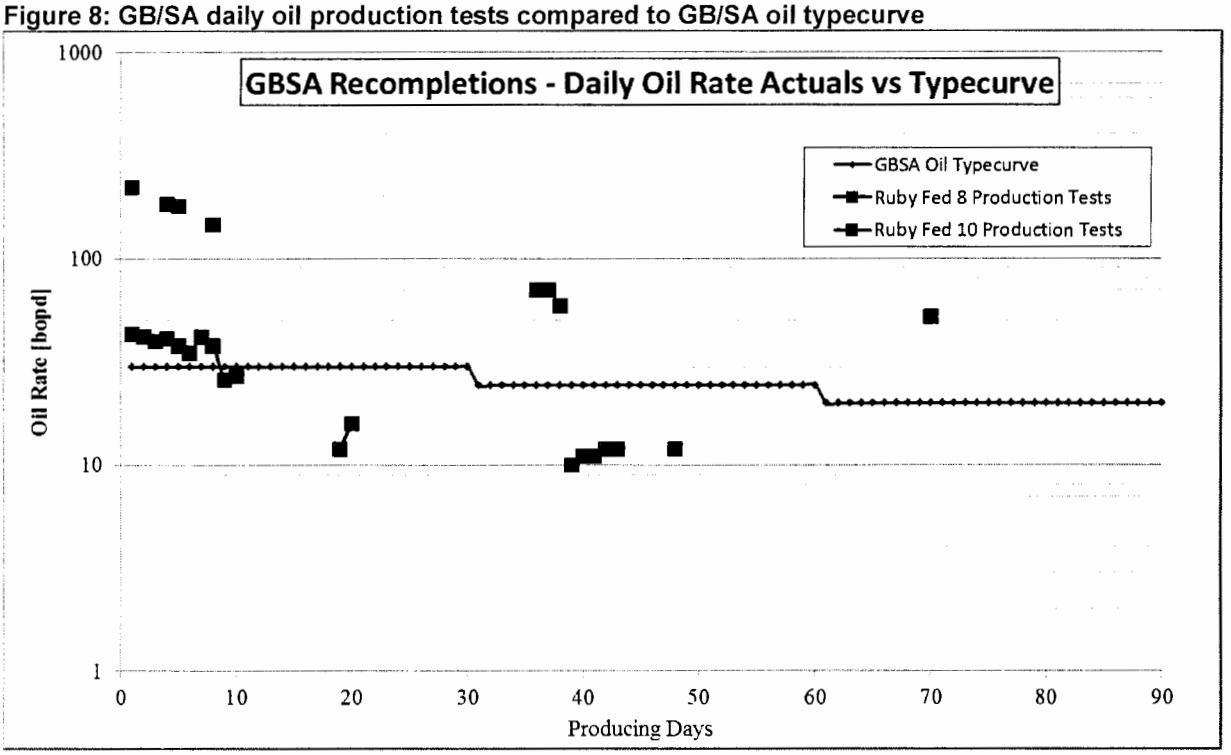
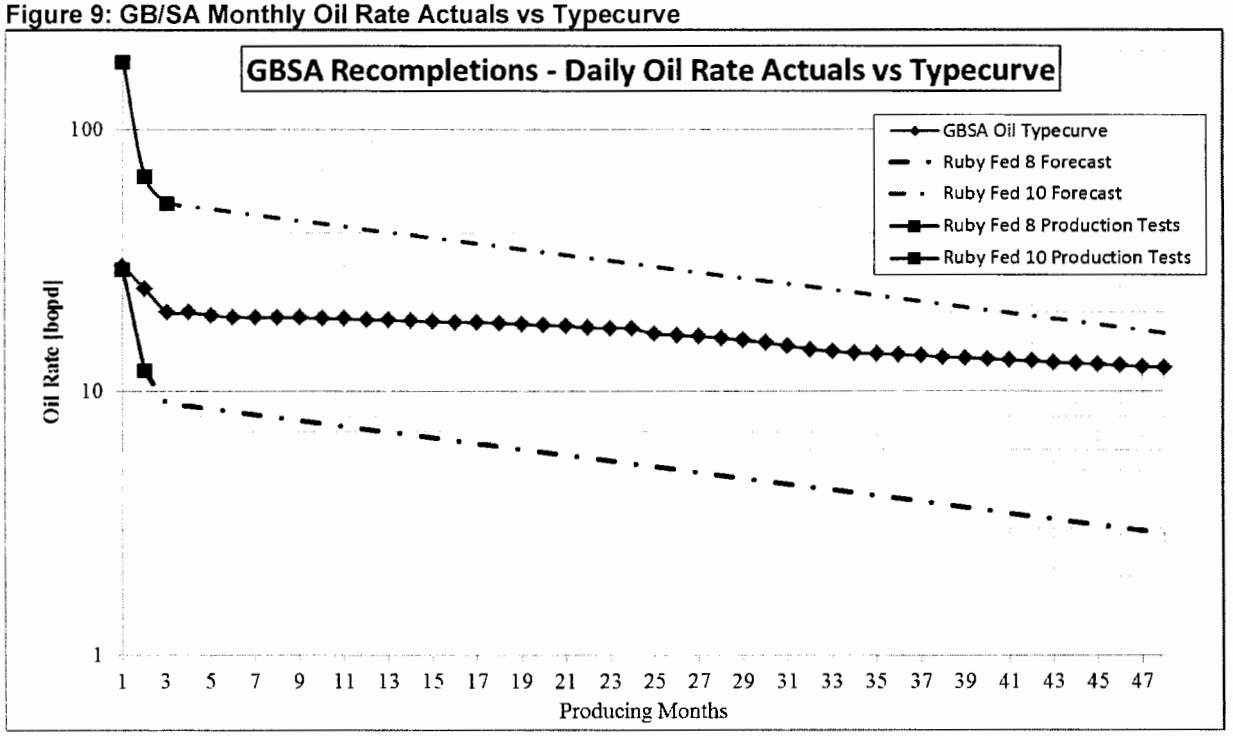


Figure 9: GB/SA Monthly Oil Rate Actuals vs Typecurve



Additional Well Work for Field Study

ConocoPhillips believes addition well work is useful to provide additional data for this field study. The wells listed below will each provide useful data for the field study. Each has been selected to provide specific information.

Well Number	Timing of Commingle	Contribution to Field Study
Ruby Federal 8	Commingle GB/SA & Yeso (zone test complete)	Basis of Allocation
Ruby Federal 10	Commingled after production test of each zone	Basis of Allocation and GB/SA decline
Ruby Federal 2	Commingled after production test of each zone	Confirmation of Allocation
Ruby Federal 12	Commingled after production test of each zone	Confirmation of Allocation
Ruby Federal 20	Commingled after production test of each zone	Confirmation of Allocation
Ruby Federal 24	Commingled from Recompletion of GB/SA	Expected Production Rates (both zones)

COP proposes to commingle the Ruby Federal 8's production by drilling out all plugs over the San Andres and Yeso formations. The Ruby Federal 10 is currently producing from the Grayburg/San Andres only and has far exceeded our type curve. ConocoPhillips wishes to continue producing the Ruby Federal 10 uninterrupted in an attempt to define the decline curve characteristics. Commingling of this well is to be filed at a later date. To further validate our study COP proposes the recompletion of 4 additional, nearby Ruby Federal Yeso wells into intervals of the Grayburg/San Andres – specifically testing the lower San Andres' productivity. The goal of these data points is to provide reinforcement of the initial allocation of 58% Yeso (Paddock/Blinebry) production to 42% GB/SA production. This allocation is an average of the type curves presented in Figures 8 and 9. Once this field study is complete it will be used as the basis in determining the contribution of Grayburg/San Andres in newly commingled and drilled wells.

Oil & Gas Composition Tests
Grayburg/San Andres Gas Test (MCA 514, tested on 1/9/14)

www.permianls.com

575.397.3713 2609 W Marland Hobbs NM 88240

For:	ConocoPhillips	Sample:	Test Separator
	Attention: Cruz Duarte	Identification:	MCA 514
	29 Vacuum Complex Lane	Company:	ConocoPhillips
	Lovington, New Mexico 88260	Lease:	
		Plant:	

Sample Data:	Date Sampled	1/9/2014	9:28 AM		
	Analysis Date	1/10/2014			
	Pressure-PSIA	129.1		Sampled by:	Dustin Armstrong
	Sample Temp F	53.9		Analysis by:	Vicki McDaniel
	Atmos Temp F	41			

H2S = 5,000 PPM

Component Analysis

		Mol Percent	GPM
Hydrogen Sulfide	H2S	0.500	
Nitrogen	N2	2.741	
Carbon Dioxide	CO2	64.602	
Methane	C1	16.938	
Ethane	C2	7.071	1.886
Propane	C3	4.983	1.369
I-Butane	IC4	0.587	0.192
N-Butane	NC4	1.438	0.452
I-Pentane	IC5	0.338	0.123
N-Pentane	NC5	0.333	0.120
Hexanes Plus	C6+	0.469	0.203
		100.000	4.346

REAL BTU/CU.FT.	
At 14.65 DRY	543.2
At 14.65 WET	533.7
At 14.696 DRY	544.9
At 14.696 WET	535.6
At 14.73 DRY	546.1
At 14.73 Wet	536.7

Specific Gravity	
Calculated	1.3295
Molecular Weight	38.5078

Grayburg/San Andres Oil Test (MCA 514, tested on 1/9/14)

LABORATORY SERVICES
Natural Gas Analysis

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

ASTM DISTILLATION

ConocoPhillips
Attention: Cruz Duarte
20 Vacuum Complex Lane
Lovington, New Mexico 88260

Sampled By: Dustin Armstrong
Sample Date: 1/9/14

Sample ID: MCA 514

Percent Distilled	Temperature		
IBP	97		
5	148		
10	188		
20	250	%Recovered =	91.0
30	326	% Residue =	5.0
40	414	% Loss =	4.0
50	505		
60	563		
70	585		
80	612		
90	646		
EP	675		

Total Sulfur	API Gravity	Specific Gravity
0.7069 wt.%	38.1	0.8343

Oil & Gas Composition Tests
Yeso Gas Test (Ruby 28, tested on 2/21/14)

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For:	ConocoPhillips	Sample:	Separator
	Attention: Josh Hill	Identification:	Ruby #28
	29 Vacuum Complex Lane	Company:	ConocoPhillips
	Lovington, New Mexico 88260	Lease:	
		Plant:	

Sample Data:	Date Sampled	2/21/2014	12:00 PM	
	Analysis Date	2/24/2014		
	Pressure-PSIA	150	Sampled by:	Logan McIlroy
	Sample Temp F	74	Analysis by:	Vicki McDaniel
	Atmos Temp F	65		

H2S = 8 PPM

Component Analysis

		Mol Percent	GPM
Hydrogen Sulfide	H2S	0.001	
Nitrogen	N2	5.671	
Carbon Dioxide	CO2	2.793	
Methane	C1	60.994	
Ethane	C2	16.278	4.342
Propane	C3	9.954	2.735
I-Butane	IC4	1.077	0.352
N-Butane	NC4	2.171	0.683
I-Pentane	IC5	0.368	0.134
N-Pentane	NC5	0.308	0.112
Hexanes Plus	C6+	0.385	0.167
		100.000	8.524

REAL BTU/CU.FT.		Specific Gravity	
At 14.65 DRY	1309.1	Calculated	0.8501
At 14.65 WET	1286.2		
At 14.696 DRY	1313.1		
At 14.696 WET	1290.8	Molecular Weight	24.6218
At 14.73 DRY	1316.1		
At 14.73 Wet	1293.4		

Yeso Oil Test (Ruby 28, tested on 2/21/14)

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575.397.3713 2609 W Marland Hobbs NM 88240

ASTM DISTILLATION

ConocoPhillips
Attention: Josh Hill
29 Vacuum Complex Lane
Lovington, New Mexico 88260

Sampled By: Logan McIlroy
Sample Date: 2/21/14

Sample ID: Ruby #28

Percent Distilled	Temperature
IBP	112
5	160
10	190
20	262
30	310
40	395
50	505
60	614
70	700
80	745
90	772
EP	775

%Recovered =	93.5
% Residue =	4.5
% Loss =	2.0

Total Sulfur	API Gravity	Specific Gravity
0.6251 wt.%	38.2	0.8338

NALCO Champion Water Analysis Report

An Ecolab Company

Attention: **Jeromie Pickering**

Customer: **ConocoPhillips (1505033)**

Location Code: **23051**
Sample ID: **AB41358**
Batch ID: **2014-02-21_MFA_SWICPWET**
Collection Date: **02/10/2014**
Receive Date: **02/20/2014**
Report Date: **02/28/2014**

Region: **Buckeye Field**
Location: **MCA Station 2 Battery**
System: **Production System**
Equipment: **Transfer Pump**
Lab ID: **ABU-1031**
Sample Point: **Down Stream Valve**

Analyses	Result	Unit
Dissolved CO2	**530**	mg/L
Dissolved H2S	**68.4**	mg/L
pH	**8**	
Pressure	**50**	psi
Temperature	**65**	° F

Analyses	Result	Unit
Ionic Strength	**3.00**	
Resistivity	**0.039**	ohms - m
Total Dissolved Solids	**165200.6**	mg/L
Conductivity	**258122**	µS - cm3
Specfic Gravity	**1.113**	
Bicarbonate	**305**	mg/L

Cations	Result	Unit
Iron	**1.915**	mg/L
Manganese	**0.393**	mg/L
Barium	**0.069**	mg/L
Strontium	**216.6**	mg/L
Calcium	**7700**	mg/L
Magnesium	**2121**	mg/L
Sodium	**52878.21**	mg/L

Anions	Result	Unit
CHLORIDE	**99977.46**	mg/L
SULFATE	**2000**	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	**-0.02**
Barite BaSO4 SI	**-0.34**
Calcite CaCO3 PTB	**127.3**
Calcite CaCO3 SI	**1.13**
Celestite SrSO4 PTB	**100.0**
Celestite SrSO4 SI	**0.47**
Gypsum CaSO4 PTB	**176.5**
Gypsum CaSO4 SI	**0.08**
Hemihydrate CaSO4 PTB	**74.4**
Hemihydrate CaSO4 SI	**0.04**

Saturation Index Calculation (Tomson-Oddo Model)

Comments:

NALCO Champion Water Analysis Report

An Ecolab Company

Attention: **Jeromie Pickering**

Customer: **ConocoPhillips (1505033)**

Location Code: **23057**

Sample ID: **AB47037**

Batch ID: **3-4-14 TG SWICPWET**

Collection Date: **02/10/2014**

Receive Date: **02/20/2014**

Report Date: **03/05/2014**

Region: **Buckeye Field**

Location: **Ruby Battery**

System: **Production System**

Equipment: **Transfer Pump**

Lab ID: **ABU-1031**

Sample Point: **Down Stream Valve**

Analyses	Result	Unit
Dissolved CO2	**650**	mg/L
Dissolved H2S	**51.3**	mg/L
pH	**8**	
Pressure	**53**	psi
Temperature	**55**	° F

Analyses	Result	Unit
Ionic Strength	**3.83**	
Resistivity	**0.031**	ohms - m
Total Dissolved Solids	**206303.2**	mg/L
Conductivity	**322347**	µS - cm3
Specfic Gravity	**1.143**	
Bicarbonate	**402.6**	mg/L

Cations	Result	Unit
Iron	**1.069**	mg/L
Manganese	**.111**	mg/L
Barium	**.059**	mg/L
Strontium	**348.3**	mg/L
Calcium	**12230**	mg/L
Magnesium	**2564**	mg/L
Sodium	**63365.50**	mg/L

Anions	Result	Unit
CHLORIDE	**125971.6**	mg/L
SULFATE	**1420**	mg/L

Scale Type	Result
Anhydrite CaSO4 PTB	**145.2**
Anhydrite CaSO4 SI	**0.12**
Barite BaSO4 SI	**-0.35**
Calcite CaCO3 PTB	**188.8**
Calcite CaCO3 SI	**1.48**
Celestite SrSO4 PTB	**180.1**
Celestite SrSO4 SI	**0.64**
Gypsum CaSO4 PTB	**244.8**
Gypsum CaSO4 SI	**0.17**
Hemihydrate CaSO4 PTB	**165.1**
Hemihydrate CaSO4 SI	**0.13**

Saturation Index Calculation (Tomson-Oddo Model)

Comments:

NALCO Champion Water Analysis Report

An Ecolab Company

Attention: **Jeromie Pickering**

Customer: **ConocoPhillips (1505033)**

Location Code: **22737**

Sample ID: **AB41355**

Batch ID: **2014-02-21_MFA_SWICPWET**

Collection Date: **02/11/2014**

Receive Date: **02/20/2014**

Report Date: **02/28/2014**

Region: **Maljamar Field**

Location: **Ruby Lease**

System: **Production System**

Equipment: **Well 8**

Lab ID: **ABU-1031**

Sample Point: **Well Head Valve Up Stream of Choke**

Analyses	Result	Unit
Dissolved CO2	240	mg/L
Dissolved H2S	119.7	mg/L
pH	8	
Pressure	150	psi
Temperature	50	° F

Analyses	Result	Unit
Ionic Strength	2.08	
Resistivity	0.053	ohms - m
Total Dissolved Solids	119765.2	mg/L
Conductivity	187129	µS - cm3
Specfic Gravity	1.08	
Bicarbonate	427	mg/L

Cations	Result	Unit
Iron	2.725	mg/L
Manganese	0.25	mg/L
Barium	0.088	mg/L
Strontium	86.44	mg/L
Calcium	2713	mg/L
Magnesium	1927	mg/L
Sodium	40734.74	mg/L

Anions	Result	Unit
CHLORIDE	70984	mg/L
SULFATE	2890	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	-0.48
Barite BaSO4 SI	-0.02
Calcite CaCO3 PTB	121.7
Calcite CaCO3 SI	0.62
Celestite SrSO4 PTB	20.5
Celestite SrSO4 SI	0.18
Gypsum CaSO4 SI	-0.19
Hemihydrate CaSO4 SI	-0.20

Saturation Index Calculation (Tomson-Oddo Model)

Comments:

NALCO Champion Water Analysis Report

An Ecolab Company

Attention: **Jeromie Pickering**

Customer: **ConocoPhillips (1505033)**

Location Code: **22634**

Sample ID: **AB41356**

Batch ID: **2014-02-21_MFA_SWICPWET**

Collection Date: **02/10/2014**

Receive Date: **02/20/2014**

Report Date: **02/28/2014**

Region: **Maljamar Field**

Location: **MCA Unit 3-B Header**

System: **Production System**

Equipment: **Well 122**

Lab ID: **ABU-1031**

Sample Point: **Well Head Valve Up Stream of Choke**

Analyses	Result	Unit
Dissolved CO2	**760**	mg/L
Dissolved H2S	**51.3**	mg/L
pH	**8**	
Pressure	**60**	psi
Temperature	**40**	° F

Analyses	Result	Unit
Ionic Strength	**1.26**	
Resistivity	**0.086**	ohms - m
Total Dissolved Solids	**74784.63**	mg/L
Conductivity	**116825**	µS - cm3
Specfic Gravity	**1.046**	
Bicarbonate	**3660**	mg/L

Cations	Result	Unit
Iron	**15.59**	mg/L
Manganese	**1.333**	mg/L
Barium	**0.138**	mg/L
Strontium	**48.65**	mg/L
Calcium	**2355**	mg/L
Magnesium	**917.2**	mg/L
Sodium	**24540.96**	mg/L

Anions	Result	Unit
CHLORIDE	**40990.76**	mg/L
SULFATE	**2255**	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	**-0.74**
Barite BaSO4 PTB	**0.0**
Barite BaSO4 SI	**0.24**
Calcite CaCO3 PTB	**1423.8**
Calcite CaCO3 SI	**1.49**
Celestite SrSO4 SI	**-0.12**
Gypsum CaSO4 SI	**-0.28**
Hemihydrate CaSO4 SI	**-0.23**

Saturation Index Calculation (Tomson-Oddo Model)

Comments:

NALCO Champion Water Analysis Report

An Ecolab Company

Attention: **Jeromie Pickering**

Customer: **ConocoPhillips (1505033)**

Location Code: **115385**
Sample ID: **AB41359**
Batch ID: **2014-02-21_MFA_SWICPWET**
Collection Date: **02/10/2014**
Receive Date: **02/20/2014**
Report Date: **02/28/2014**

Region: **Maljamar Field**
Location: **Ruby Lease**
System: **Production System**
Equipment: **Well 35**
Lab ID: **ABU-1031**
Sample Point: **Well Head Valve Up Stream of Choke**

Analyses	Result	Unit
Dissolved CO2	640	mg/L
Dissolved H2S	34.2	mg/L
pH	8	
Pressure	150	psi
Temperature	65	° F

Analyses	Result	Unit
Ionic Strength	3.62	
Resistivity	0.033	ohms - m
Total Dissolved Solids	195915.4	mg/L
Conductivity	306115	µS - cm3
Specfic Gravity	1.136	
Bicarbonate	122	mg/L

Cations	Result	Unit
Iron	1.953	mg/L
Manganese	0.14	mg/L
Barium	0.073	mg/L
Strontium	339.7	mg/L
Calcium	10740	mg/L
Magnesium	2250	mg/L
Sodium	61483.62	mg/L

Anions	Result	Unit
CHLORIDE	119972.95	mg/L
SULFATE	1005	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	-0.09
Barite BaSO4 SI	-0.53
Calcite CaCO3 PTB	46.5
Calcite CaCO3 SI	0.95
Celestite SrSO4 PTB	130.2
Celestite SrSO4 SI	0.43
Gypsum CaSO4 SI	-0.07
Hemihydrate CaSO4 SI	-0.11

Saturation Index Calculation (Tomson-Oddo Model)

Comments:

NALCO Champion Water Analysis Report

An Ecolab Company

Attention: **Jeromie Pickering**

Customer: **ConocoPhillips (1505033)**

Location Code: **115389**
Sample ID: **AB41360**
Batch ID: **2014-02-21_MFA_SWICPWET**
Collection Date: **02/10/2014**
Receive Date: **02/20/2014**
Report Date: **02/28/2014**

Region: **Maljamar Field**
Location: **MCA Unit**
System: **Production System**
Equipment: **Well 512**
Lab ID: **ABU-1031**
Sample Point: **Well Head Valve Up Stream of Choke**

Analyses	Result	Unit
Dissolved CO2	420	mg/L
Dissolved H2S	85.5	mg/L
pH	8	
Pressure	200	psi
Temperature	70	° F

Analyses	Result	Unit
Ionic Strength	1.64	
Resistivity	0.066	ohms - m
Total Dissolved Solids	96435.83	mg/L
Conductivity	150677	µS - cm3
Specfic Gravity	1.061	
Bicarbonate	3416	mg/L

Cations	Result	Unit
Iron	2.569	mg/L
Manganese	0.226	mg/L
Barium	0.069	mg/L
Strontium	73.67	mg/L
Calcium	2598	mg/L
Magnesium	995.2	mg/L
Sodium	32657.27	mg/L

Anions	Result	Unit
CHLORIDE	53987.83	mg/L
SULFATE	2705	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	-0.45
Barite BaSO4 SI	-0.25
Calcite CaCO3 PTB	1501.9
Calcite CaCO3 SI	1.73
Celestite SrSO4 PTB	9.9
Celestite SrSO4 SI	0.09
Gypsum CaSO4 SI	-0.22
Hemihydrate CaSO4 SI	-0.24

Saturation Index Calculation (Tomson-Oddo Model)

Comments:

NALCO Champion Water Analysis Report

An Ecolab Company

Attention: **Jeromie Pickering**

Customer: **ConocoPhillips (1505033)**

Location Code: **118437**
Sample ID: **AB41361**
Batch ID: **2014-02-21_MFA_SWICPWET**
Collection Date: **02/10/2014**
Receive Date: **02/20/2014**
Report Date: **02/28/2014**

Region: **Maljamar Field**
Location: **MCA Unit**
System: **Production System**
Equipment: **Well 514**
Lab ID: **ABU-1031**
Sample Point: **Well Head Valve Up Stream of Choke**

Analyses	Result	Unit
Dissolved CO2	340	mg/L
Dissolved H2S	188.1	mg/L
pH	8	
Pressure	150	psi
Temperature	61	° F

Analyses	Result	Unit
Ionic Strength	1.67	
Resistivity	0.066	ohms - m
Total Dissolved Solids	96571.56	mg/L
Conductivity	150891	µS - cm3
Specfic Gravity	1.063	
Bicarbonate	1098	mg/L

Cations	Result	Unit
Iron	1.116	mg/L
Manganese	0.23	mg/L
Barium	0.082	mg/L
Strontium	48.41	mg/L
Calcium	2266	mg/L
Magnesium	816.9	mg/L
Sodium	33758.44	mg/L

Anions	Result	Unit
CHLORIDE	55987.38	mg/L
SULFATE	2595	mg/L

Scale Type	Result
Anhydrite CaSO4 SI	-0.57
Barite BaSO4 SI	-0.13
Calcite CaCO3 PTB	428.6
Calcite CaCO3 SI	1.09
Celestite SrSO4 SI	-0.10
Gypsum CaSO4 SI	-0.28
Hemihydrate CaSO4 SI	-0.29

Saturation Index Calculation (Tomson-Oddo Model)

Comments:

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

BLM
Carlsbad Field offic
620 E. Greene St
Carlsbad, NM
88220

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☑ Addressee

B. Received by (Printed Name) [illegible] C. Date of Delivery 6/6/14

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail® ☐ Priority Mail Express™
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ Collect on Delivery

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7013 3020 0000 4635 4660

PS Form 3811, July 2013 2,12,2014 Domestic Return Receipt All Ruby State Filing

ConocoPhillips

Susan B. Maunder
Sr. Regulatory Specialist
Phone: (281) 206-5281

ConocoPhillips Company
600 N. Dairy Ashford Rd, Office P10-3096
Houston, TX 77079-1175

June 10, 2014

State of New Mexico
Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

SUBJECT: REQUEST FOR NON-STANDARD LOCATION FOR RUBY FEDERAL #2 –
API 30-025-40394

Dear Sirs,

ConocoPhillips Company respectfully requests a non-standard location exception to produce the Ruby Federal #2 well from the Maljamar; Grayburg, San Andres Pool. The lease is recorded as NM LC029405B. The well is located in UL O, 1140' from south line and 2310' from east line of Section 17, Township 17S, Range 32E, Lea County, New Mexico. The top of Grayburg and bottom of San Andres is assumed to be located at the same coordinates in UL O, of Section 17, Township 17S, Range 32E due to the vertical design. The footages place the well near a 330' from a Qtr/Qtr Section line. However, no lease boundary encroachment occurred. The table below details interest ownership of adjacent spacing units in Section 17. ConocoPhillips is 100% lessee and 100% working interest owner of the Ruby federal lease.

Spacing Unit	Adjacent Units	Operator(s)
UL O	UL P, I, J, K, N; Sec. 17, 17S, 32E	ConocoPhillips Company
UL O	UL A, B, C; Sec. 20, 17S, 32E	ConocoPhillips Company

Enclosed are the following documents in support of this request.

- Administrative Application Checklist
- Copy of the New Mexico Form C-102

A copy of this submittal is being sent to Bureau of Land Management, Carlsbad Field Office.

This well initially was moved to this location to protect Sand Dunes Lizard habitat. The granting of this exception will prevent waste and minimize surface disturbance.

If you have questions regarding this request, I can be reached at 281-206-5281 or via email at Susan.B.Maunder@conocophillips.com.

Sincerely,

Susan B. Maunder

Susan B. Maunder
Senior Regulatory Specialist
ConocoPhillips Company

New Mexico Energy, Minerals and Natural Resources Department

December 22, 2011

ConocoPhillips Company
Attn: Brian D. Maiorino

ADMINISTRATIVE NON-STANDARD LOCATION ORDER

Administrative Order NSL-6528
Administrative Application Reference No. pTWG11-34650118

ConocoPhillips Company
OGRID 217817
Ruby Federal Well No. 2
API No. 30-025-

Proposed Location:

Footages	Unit	Section	Township	Range	County
1140 FSL & 2310 FEL	O	17	17S	32E	Lea

Proposed Unit:

Description	Acres	Pool	Pool Code
SW/4 SE/4 of Section 17	40	West Maljamar; Glorieta-Yeso	44500

Reference is made to your application received on December 12, 2011.

You have requested to drill or re-complete this well at an unorthodox oil well location described above, in the referenced pool or formation. This location is governed by statewide Rule 15.9.A [19.15.15.9.A NMAC], which provides for 40-acre units, with wells located at least 330 feet from a unit outer boundary. This location is less than 330 feet from a unit boundary.

Your application has been duly filed under the provisions of Division Rules 15.13 [19.15.15.13 NMAC] and 4.12.A(2) [19.15.4.12.A(2) NMAC].

It is our understanding that you are seeking this location to comply with United States Bureau of Land Management surface siting requirements.

It is also understood that notice to offsetting operators or owners is unnecessary due to common ownership.

Pursuant to the authority conferred by Division Rule 15.13.B, the above-described unorthodox location is hereby approved.

This approval is subject to your being in compliance with all other applicable Division rules, including, but not limited to Division Rule 5.9 [19.15.5.9 NMAC].

Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

Sincerely,

Jami Bailey
Director

JB/db

cc: New Mexico Oil Conservation Division – Hobbs
United States Bureau of Land Management