

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED  
OMB No. 1004- 0137  
Expires: July 31, 2010

RECEIVED

JAN 31 2013

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other Instructions on page 2.

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Serial No. NMNM14778
2. Name of Operator COG Production LLC	6. If Indian, Allottee, or Tribe Name
3a. Address 2208 W. Main Street Artesia, NM 88210	7. If Unit or CA. Agreement Name and/or No.
3b. Phone No. (include area code) 575-748-6940	8. Well Name and No. Mescal 22 Federal #2H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 880' FSL & 560' FEL Unit Letter M (SWSW) Sec 22-25S-29E	9. API Well No. 30-015-37949
Lat. Long.	10. Field and Pool, or Exploratory Area Corral Draw; Bone Spring
	11. County or Parish, State Eddy County NM

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Deepen
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Fracture Treat
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Plug and abandon
	<input type="checkbox"/> Plug back
	<input type="checkbox"/> Production ( Start/ Resume)
	<input type="checkbox"/> Reclamation
	<input type="checkbox"/> Recomplete
	<input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Water Disposal
	<input type="checkbox"/> Water Shut-off
	<input type="checkbox"/> Well Integrity
	<input checked="" type="checkbox"/> Other Downhole Commingle

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

See attached C-107A application for Downhole Commingling.

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

6/3/2011 Set RBP @ 6,855'

6/4/2011 TIH w/ guns and gamma-ray/ccl, correlate to GR/CCL log and perforate 5290' - 5312' 2 jspf 44 holes; Poohw/ wireline; R/D wireline; TIH w/ packer to 5200' and SDFN. Prep. To spot acid & breakdown & pump acid/ball job in A.M.

6/5/2011 R/U acid crew and spot 500 glns. 15% NEFE across perforations 5,290' - 5,312'; PUH w/ packer to 5,200' and reverse acid into tubing; set packer and monitor backside; acidize perfs. w/ 4500 glns. 15% NEFE w/ 88 Bioballs; flowback to tank

7/19/2011 RU Basic Pumping Services & frac Delaware with 29,000 gals XL Borate + 55,000 lbs 16/30 RC 1200 psi max.

7/28/2011 RIH w/ tbg and wash down to RBP. Circ hole clean and release RBP and pool out of hole.

7/30/2011 RIH w/ Rod pumping equipment, hang well on.

14. I hereby certify that the foregoing is true and correct.

Name (Printed/ Typed)

Mayte Reyes

Title: Regulatory Analyst

Signature: *Mayte Reyes*

Date: 8/1/12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by:

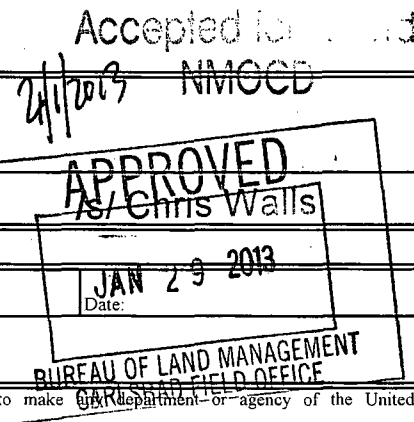
Title:

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

Office:

Title 18 U.S.C. Section 1001 AND Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)



DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 15, 2009

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 96217	Pool Name Willow Lake; Bone Spring
Property Code	Property Name MESCAL "22" FEDERAL	Well Number 2H
OGRID No.	Operator Name COG PRODUCTION LLC	Elevation 3071'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	22	25 S	29 E		880	SOUTH	560	EAST	EDDY

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
M	22	25 S	29 E		660	SOUTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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

<p><b>PROPOSED BOTTOM HOLE LOCATION</b> Lat - N 32°06'35.96" Long - W 103°58'47.23" NMSPCE- N 403930.319 E 650801.890 (NAD-83)</p> <p><b>SURFACE LOCATION</b> Lat - N 32°06'38.24" Long - W 103°57'55.89" NMSPCE- N 404175.302 E 655217.178 (NAD-83)</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>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.</p> <p><i>Melanie J. Porter</i> 8/11/12 Signature Date</p> <p><i>Melanie J. Porter</i> Printed Name</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>APRIL 14 2010 Date Surveyed <i>Casey L. Jones</i> Signature Professional Surveyor W.O. No. 22645 Certificate No. 7977 L. Jones BASIN SURVEYS</p>
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Revised October 15, 2009

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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 13365	Pool Name Corral Canyon; Delaware
Property Code	Property Name MESCAL "22" FEDERAL	Well Number 2H
OGRID No.	Operator Name COG PRODUCTION LLC	Elevation 3071'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	22	25 S	29 E		880	SOUTH	560	EAST	EDDY

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
M	22	25 S	29 E		660	SOUTH	330	WEST	EDDY

Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.
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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

<p><b>PROPOSED BOTTOM HOLE LOCATION</b> Lat - N 32°06'35.96" Long - W 103°58'47.23" NMSPCE- N 403930.319 E 650801.890 (NAD-83)</p>	<p><b>SURFACE LOCATION</b> Lat - N 32°06'38.24" Long - W 103°57'55.89" NMSPCE- N 404175.302 E 655217.178 (NAD-83)</p>	<p><b>OPERATOR CERTIFICATION</b> 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.  Signature: <i>Melanie J. Parker</i> Date: 8/1/12 Printed Name: <i>Melanie J. Parker</i></p> <p><b>SURVEYOR CERTIFICATION</b> I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.  Date: APRIL 14, 2010 Signature: <i>CAROL A. JONES</i> Professional Surveyor W.O. No. 22645 Certificate No. 7977 BASIN SURVEYS</p>
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DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.
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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]**

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
- [A] Location - Spacing Unit - Simultaneous Dedication  
☐ NSL ☐ NSP ☐ SD
- Check One Only for [B] or [C]
- [B] Commingling - Storage - Measurement  
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
- [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] ☒ 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.

<u>Mayte Reyes</u>	<u><i>Mayte Reyes</i></u>	<u>Regulatory Analyst</u>	<u>8/01/12</u>
Print or Type Name	Signature	Title	Date
		<u>mreyes1@concho.com</u>	
		e-mail Address	

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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

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

APPLICATION FOR DOWNHOLE COMMINGLING

COG Operating LLC 2208 West Main Street, Artesia, NM 88210  
Operator Address

Mescal 22 Federal #2H Unit Letter P Section 22-T25S-R29E Eddy  
Lease Well No. Unit Letter-Section-Township-Range County

OGRID No. 217955 Property Code API No. 30-015-30949 Lease Type: ☒ Federal ☐ State ☐ Fee  
- 37949

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Corral Canyon Delaware		Willow Lake/Bone Spring
Pool Code	13365		96217
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	5290' - 5312' Perforated		7850' - 11140' Perforated
Method of Production (Flowing or Artificial Lift)	Artificial Lift		Artificial Lift
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)			
Oil Gravity or Gas BTU (Degree API or Gas BTU)	40		38
Producing, Shut-In or New Zone	Producing 7/19/11		Producing completed 9/20/10
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: 7/30/11  Rates: 45 oil, 138 H2O, 80mcf	Date:  Rates:	Date: 10/28/2010  Rates: 170 oil, 445 H2O, 1650 mcf
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil Gas 29 % 7 %	Oil Gas % %	Oil Gas 71 % 93 %

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes ☒ No ☐  
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes ☐ No ☐

Are all produced fluids from all commingled zones compatible with each other? Yes ☒ No ☐

Will commingling decrease the value of production? Yes ☐ No ☒

If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application? Yes ☒ No ☐

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

Attachments:

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

PRE-APPROVED POOLS

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

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

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

SIGNATURE Mayte Reyes TITLE Regulatory Analyst DATE 8/01/2012

TYPE OR PRINT NAME Mayte Reyes TELEPHONE NO. ( 575 ) 748-6945

E-MAIL ADDRESS mreyes1@concho.com



**Engineering Summary**  
**Form C-107A**  
**Application for Downhole Commingling**

**Mescal 22 Fed #2H**  
**30-015-37949**  
**(Unit P, Sec. 22-T25S-R29E)**

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The Mescal 22 Fed #2H was acquired by Concho Resources in November 2011. While going through our due diligence process we have identified this well as being commingled in the Bone Springs and Delaware prior to having a C-107A DHC approved. Thus, Concho Resources is proposing to downhole commingle the Bone Springs and the Delaware in the captioned well.

No Crossflow will occur because this well will be rod pumped in a pumped down condition. The proposed zonal allocation is described below. A nearby Bone Springs well, White Fed Com #1H (attached), and a nearby Delaware well, Pickett Draw 16 St #2H (attached) will be used as analogs for decline behavior over time.

Bone Springs: The Bone Springs was completed in September 2010. It came in at 170 BOPD/ 1650 MCFD much like the offset White Fed Com #1H (production plot attached). The best engineering estimate is that the oil will decline 80%/yr for 1 year followed by 27%/yr for 2 years and 7%/yr thereafter. The gas will decline 62%/yr for 1 year followed by 35%/yr for 2 years and then 5%/yr thereafter.

Qioil= 170 bopd

Qyr1= 34 bopd

Qyr3= 18 bopd

Qel= 1 bopd

$$\begin{aligned} \text{EUR} &= \frac{-365 (170-34)}{\ln (1-.8)} + \frac{-365 (34-18)}{\ln (1-.27)} + \frac{-365 (18-1)}{\ln (1-.07)} \\ &= 30843 + 18557 + 85503 \text{ BO} \\ &= 134903 \text{ BO} \end{aligned}$$



Qgas= 1650 mcf/d

Qyr1= 363 mcf/d

Qyr3= 153 mcf/d

Qel= 5 mcf/d

$$\begin{aligned} \text{EUR} &= \frac{-365 (1650-363)}{\ln (1-.78)} + \frac{-365 (363-153)}{\ln (1-.35)} + \frac{-365 (153-5)}{\ln (1-.08)} \\ &= 310248 + 177932 + 647865 \text{ MCF} \\ &= 1,136,045 \text{ MCF} \end{aligned}$$

Delaware: The Delaware was added in July 2011. The incremental production was roughly 45 BOPD/ 80 MCFD. The best engineering estimate is that the oil will decline 65%/yr for 1 year followed by 28%/yr for 2 years and 7%/yr thereafter. The gas will decline 54%/yr for 3 year followed by 5%/yr thereafter.

Qioil= 45 bopd

Qyr1= 16 bopd

Qyr3= 8 bopd

Qel= 1 bopd

$$\begin{aligned} \text{EUR} &= \frac{-365 (45-16)}{\ln (1-.65)} + \frac{-365 (16-8)}{\ln (1-.28)} + \frac{-365 (8-1)}{\ln (1-.07)} \\ &= 10083 + 8889 + 35207 \text{ BO} \\ &= 54179 \text{ BO} \end{aligned}$$

Qgas= 80 mcf/d

Qyr3= 8 mcf/d

Qel= 5 mcf/d

$$\begin{aligned} \text{EUR} &= \frac{-365 (80-11)}{\ln (1-.48)} + \frac{-365 (11-5)}{\ln (1-.05)} \\ &= 38513 + 42695 \text{ MCF} \\ &= 81,209 \text{ MCF} \end{aligned}$$



Zonal Allocation:

$$\text{Bone Springs Oil} = \frac{134903 \text{ BO}}{134903 + 54179 \text{ BO}} = 71\%$$

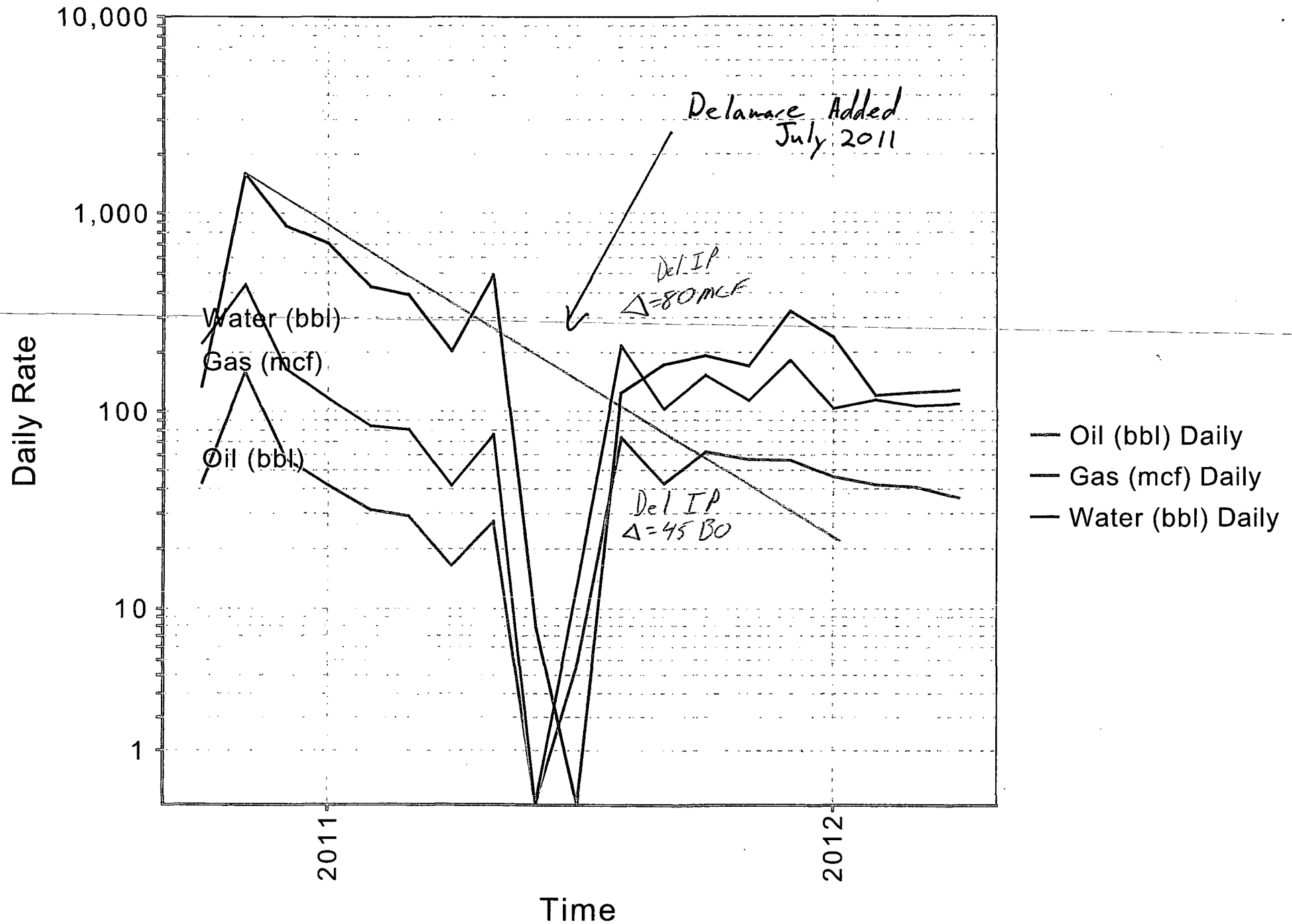
$$\text{Bone Springs Gas} = \frac{1136045 \text{ MCF}}{1136045 + 81209 \text{ MCF}} = 93\%$$

$$\text{Delaware Oil} = 100 - 71\% = 29\%$$

$$\text{Delaware Gas} = 100 - 93\% = 7\%$$

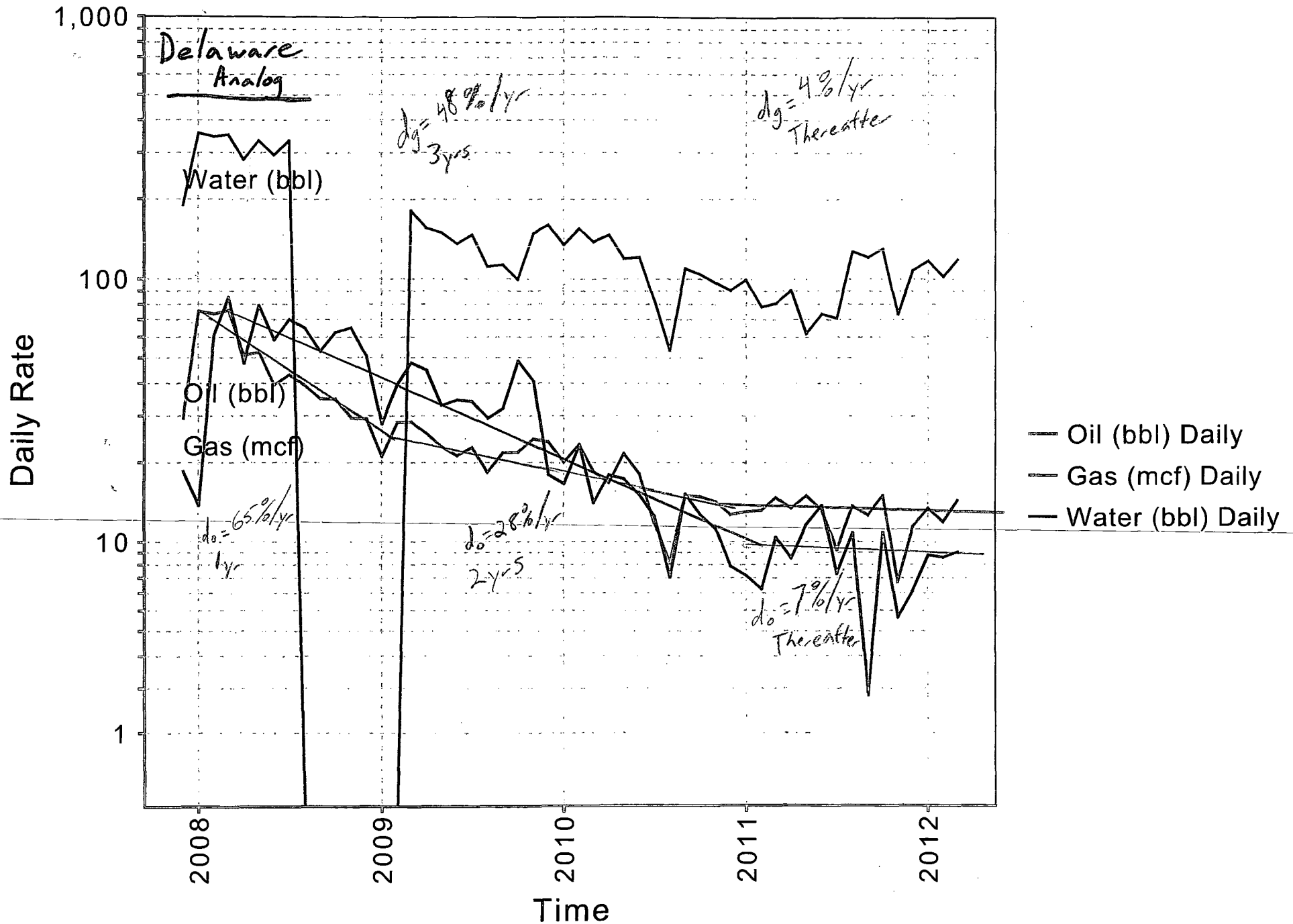


Daily Rate vs. Time Graph  
Lease Name: MESCAL 22 FEDERAL - Well Number: 2 - Production ID:  
1300220153794996217



# Daily Rate vs. Time Graph

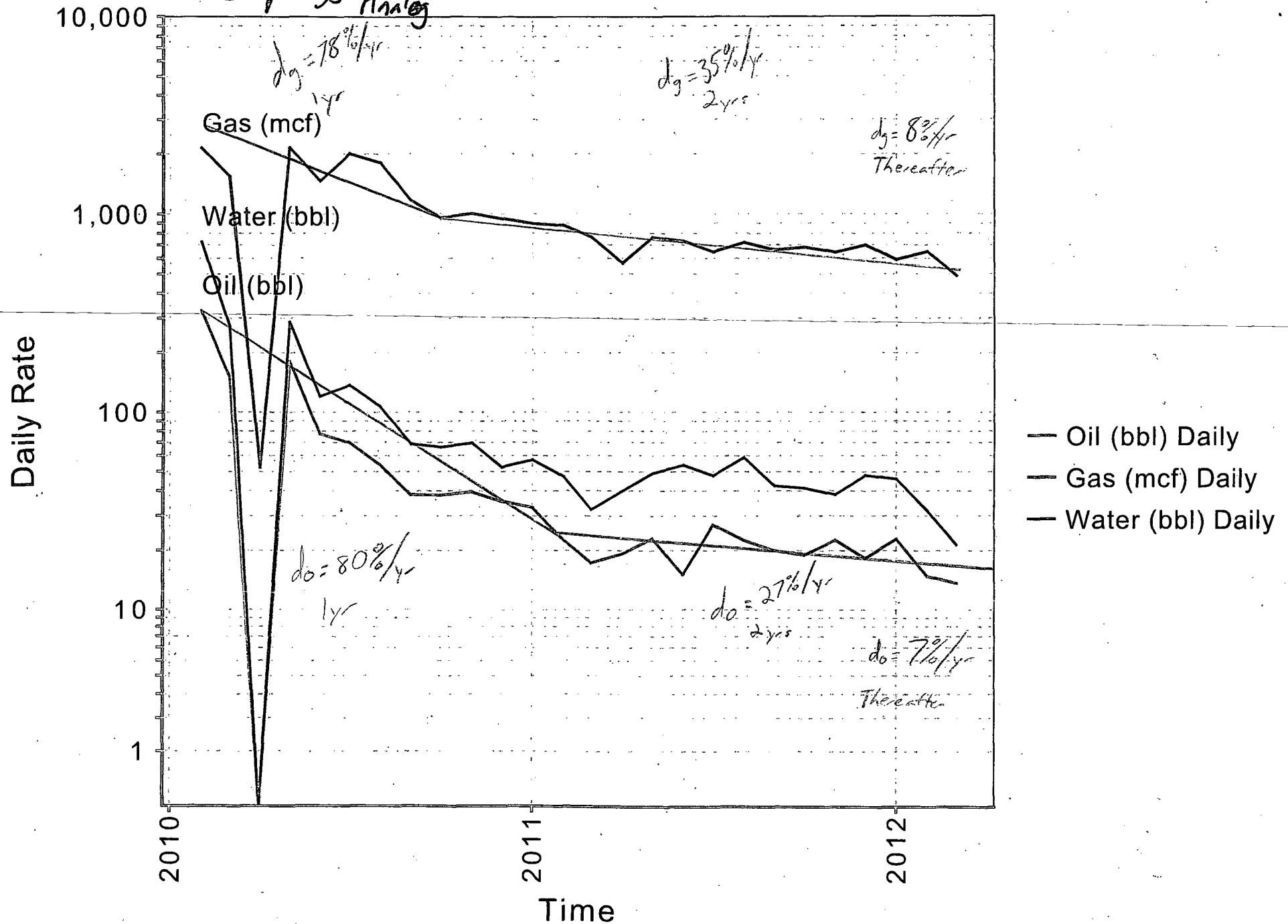
Lease Name: PICKETT DRAW 16 STATE - Well Number: 2-H - Production ID:  
1300220153568113365



# Daily Rate vs. Time Graph

Lease Name: WHITE FEDERAL COM - Well Number: 1H - Production ID:

*Bone Springs Analog* 1300220153618596217



## Order of the Authorized Officer

**COG Production LLC**

**Mescal – 02H**

**API 30-015-37949**

**T25S-R29E, Sec 22**

December 13, 2012

1. Subject to approval by the New Mexico Oil Conservation Division.
2. This sundry filing is a year late and demonstrates negligence of adherence to the Conditions of Approval attached to the notice of intent for this well filed 03/16/2011.
3. This sundry is not a notice of intent, but a late subsequent report and attempt to reconcile past operations.
4. File the BLM Form 3160-4 **Completion Report** with updated wellbore schematic within 30 days.

### Access information for use of Form 3160-5 "Sundry Notices and Reports on Wells"

NM Fed Regs & Forms - [http://www.blm.gov/nm/st/en/prog/energy/oil\\_and\\_gas.html](http://www.blm.gov/nm/st/en/prog/energy/oil_and_gas.html)

§ 43 CFR 3162.3-2 Subsequent Well Operations.

§ 43 CFR 3160.0-9 (c)(1) Information collection.

§ 3162.4-1 (c) Well records and reports.