

12/29/2014 DATE IN	SUSPENSE	MAM ENGINEER	12/29/2014 LOGGED IN	DHC TYPE	PMAM/436348763 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

- DHC 4731
 - CAZa Operating, LLC
 2490999
 weyde
 - M42 SLIM #15
 Federal #1
 30-025-38469
 Pool
 - Leasing Bonaspring
 37570
 - Leasing
 Delaware
 Northeast
 37584

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- [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.

James Bruce
 Print or Type Name

James Bruce
 Signature

Attorney for applicant
 Title

9/17/14
 Date

jamesbruce@aol.com
 e-mail Address

JAMES BRUCE
ATTORNEY AT LAW

POST OFFICE BOX 1056
SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213
SANTA FE, NEW MEXICO 87501

(505) 982-2043 (Phone)
(505) 660-6612 (Cell)
(505) 982-2151 (Fax)

jamesbruc@aol.com

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2014 DEC 29 A 8:18

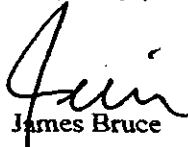
September 17, 2014

Florene Davidson
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Dear Florene:

Enclosed is a downhole commingling application, filed on behalf of Caza Operating LLC.
Please give it to the appropriate hearing examiner. Thanks.

Very truly yours,



James Bruce

Attorney for Caza Operating, LLC

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE- Other Instructions on reverse side.

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

2. Name of Operator **Caza Operating, LLC**

3a. Address
200 N. Lorraine, Suite 1550, Midland, Texas 79701

3b. Phone No. (include area code)
432 682 7424

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1980 FNL & 1980 FWL, Sec 15, T-28S, R-34-E

5. Lease Serial No.
NM99048

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
Mud Slide Lim 15 Federal # 1

9. API Well No.
30 025 38469

10. Field and Pool, or Exploratory Area
Lea; Delaware NW

11. County or Parish, State
Lea, New Mexico

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Commingle Lea Bone
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Sprgs 37570 w/ Lea;
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	Delaware NW 37584

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 recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Caza Operating, LLC respectfully request authorization from OCD to commingle the currently production Lower Brushy Canyon Perfs 8291-8306 (pool 37584) w/ the Bone Springs perfs 9488-10,925 (pool 37570). We see no adverse affect combining both zones so as to maximize Rate of Return. Attached are C-102's for both zones, Production curves for both zones, Allocation sheet & well bore schematic showing both zones combined. BLM is aware of our request.

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

Richard L. Wright

Title **Operations Manager, Caza Operating, LLC**

Signature

Richard L. Wright

Date

08/25/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

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.

Title

Date

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 to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

Caza Operating, LLC; 200 North Loraine, Suite 1550, Midland, Texas 79701

Operator

Address

Mud Slide Slim 15 Federal # 1

F Sec 15, T20S, R34E Lea

Lease

Well No.

Unit Letter-Section-Township-Range

County

OGRID No. 249099 Property Code 36578 API No. 30-025-38469 Lease Type: ☒ Federal ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Lea; Delaware NE		Lea; Bone Spring
Pool Code	37584		37570
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	8291-8306 (perf)		9488-10.925 (Perf)
Method of Production (Flowing or Artificial Lift)	Rod Pump		Rod Pump
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)	3000 est		3500 est
Oil Gravity or Gas BTU (Degree API or Gas BTU)	41.4		39.1
Producing, Shut-In or New Zone	Producing		Shut in
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: 8-17-2014 Rates: 10.5 BOPD 2 mcf/d	Date: Rates:	Date: 11-22-2013 Rates: 16 BOPD 8 mcf/d
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 40 % 20 %	Oil Gas % %	Oil Gas 60 % 80 %

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.

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, Artesia, NM 88210
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 478-3460 Fax: (505) 478-3462

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 30-025-38469	² Pool Code 37584	³ Pool Name Lea, Delaware NE
⁴ Property Code 36578	⁵ Property Name Mud Slide Slim 15 Fed	
⁶ Well Number 1		
⁷ OGRID No. 249099	⁸ Operator Name Caza Operating, LLC	⁹ Elevation 4384

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	15	20-S	34-E		1980	North	1980	West	Lea

¹¹ Bottom Hole Location If Different From Surface

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

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

	¹⁶ 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 undivided 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: <u>Richard L. Wright</u> Date: <u>8-22-14</u> Printed Name: <u>Richard L. Wright</u> E-mail Address: <u>rwright@cazapetro.com</u>
	¹⁷ 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
District III
1000 Rio Grande 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 30-025-38489	² Pool Code 37570	³ Pool Name Lea; Bone Springs
⁴ Property Code 36578	⁵ Property Name Mud Slide Slim 15 Fed	⁶ Well Number 1
⁷ OGRID No. 249099	⁸ Operator Name Caza Operating, LLC	⁹ Elevation 4384

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot ldn	Feet from the	North/South line	Feet from the	East/West line	County
F	15	20-S	34-E		1980	North	1980	West	Lea

¹¹ 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

¹² Dedicated Acres 80	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--	-------------------------------	----------------------------------	-------------------------

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

	16 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 undivided 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 is a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.	
	Signature <i>Richard L. Wright</i> Printed Name Richard L. Wright	Date 8-22-14
	17 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	

Allocation Spreadsheet_Mud Slide Slim 30-025-38469

Lea; Bone Sprgs 37570

Test Date	Oil	Wtr	Gas
11/1/13	20	27	14
11/2/13	17	30	13
11/3/13	17	27	15
11/4/13	17	20	16
11/5/13	15	27	4
11/6/13	10	20	5
11/7/13	12	23	6
11/8/13	8	23	7
11/9/13	10	27	6
11/10/13	7	30	7
11/11/13	7	20	8
11/12/13	8	27	6
11/13/13	22	16	6
11/14/13	20	10	5
11/15/13	18	20	10
11/16/13	11	17	7
11/17/13	13	16	7
11/18/13	13	6	6
11/19/13	18	7	5
11/20/13	20	13	5
11/21/13	20	26	5
Avg Rate	14	21	8

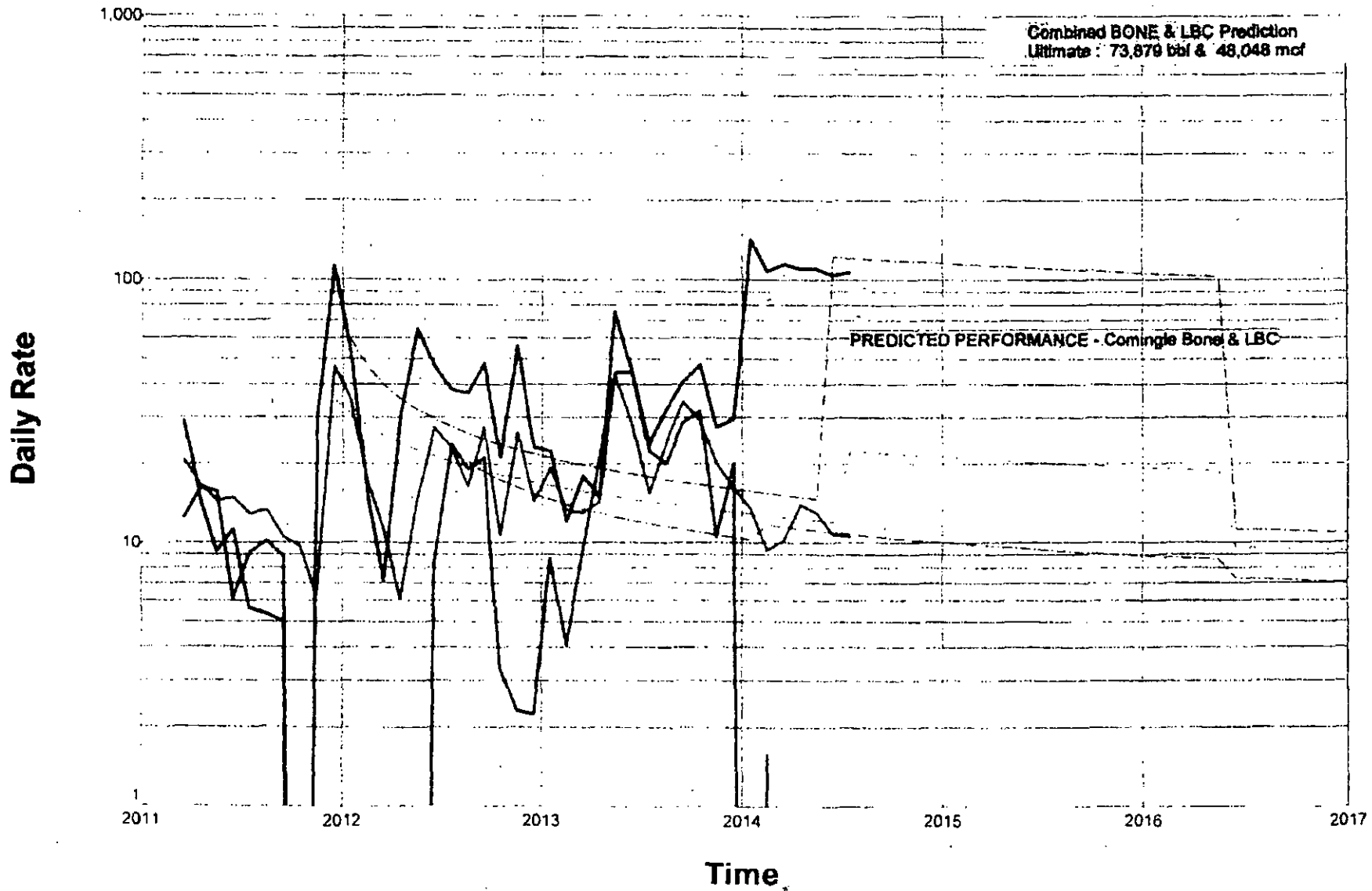
Lea; Delaware NE

Test Date	Oil	Wtr	Gas
8/1/14	10	110	2
8/2/14	10	100	2
8/3/14	12	103	2
8/4/14	10	110	2
8/5/14	5	100	2
8/6/14	7	106	2
8/7/14	10	94	2
8/8/14	10	100	2
8/9/14	8	104	2
8/10/14	8	106	2
8/11/14	17	123	2
8/12/14	7	100	2
8/13/14	12	97	2
8/14/14	7	94	2
8/15/14	10	102	2
8/16/14	10	112	2
8/17/14	8	107	2
Avg Rate	9.47	104	2

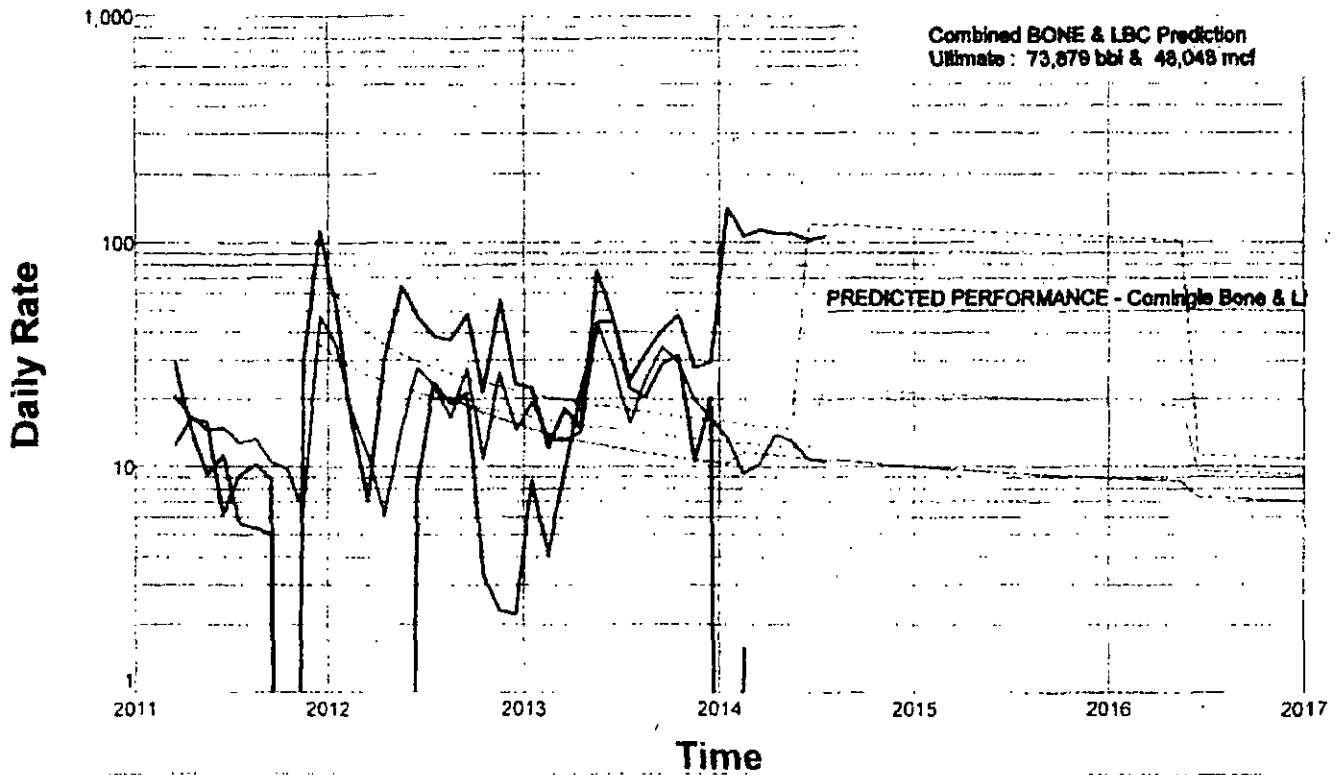
Allocation	Oil	Water	Gas
Bone=	14.00	21.00	8.00
Brushy=	9.47	104.00	2.00
Total	23.47	125.00	10.00

Bone %	0.60	0.17	0.8
Brushy %	0.40	0.83	0.2
	1	1	1

Mud Slide Slim 15-1 PREDICTED PERFORMANCE

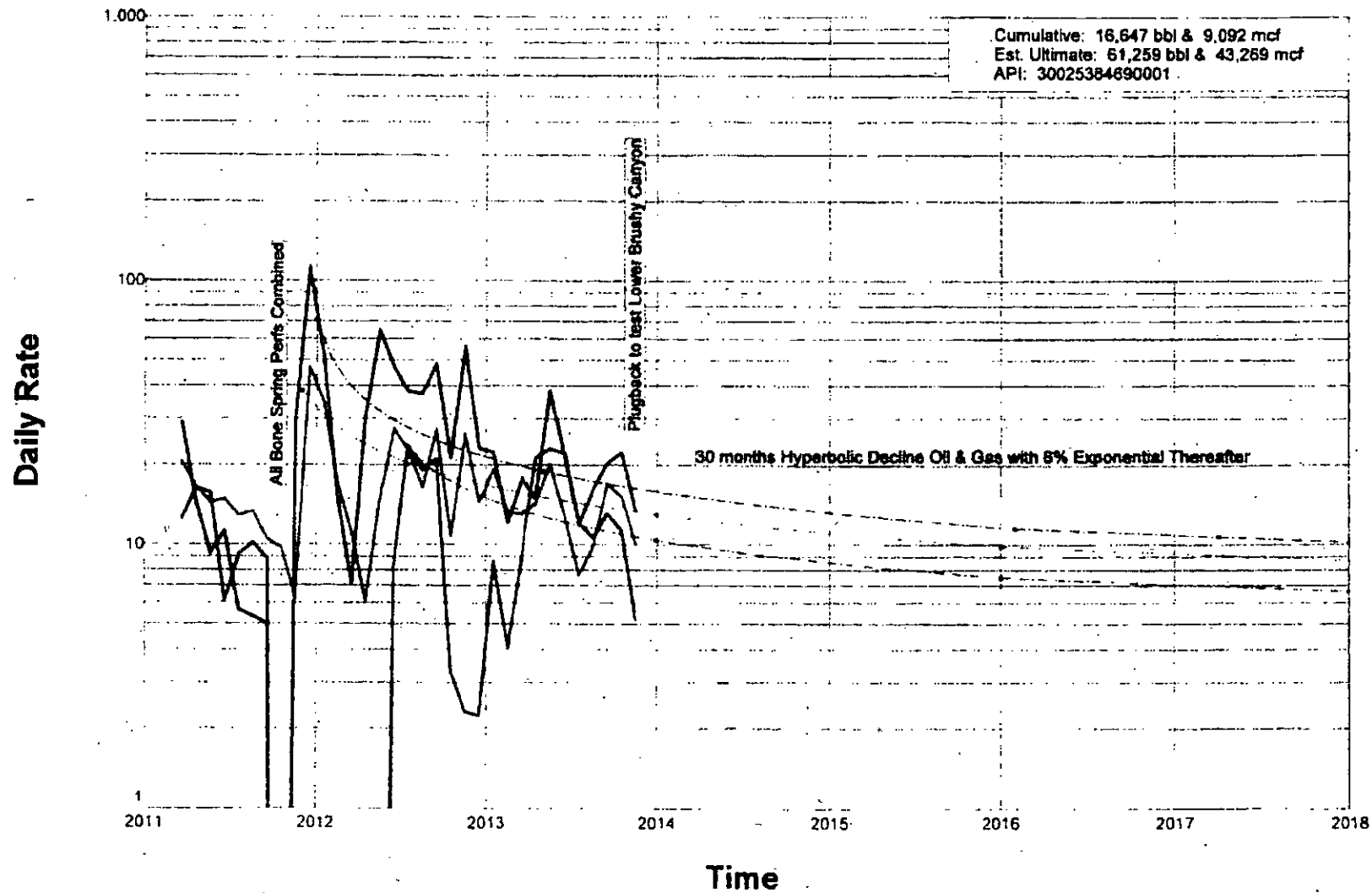


Mud Slide Slim 15-1 PREDICTED PERFORMANCE

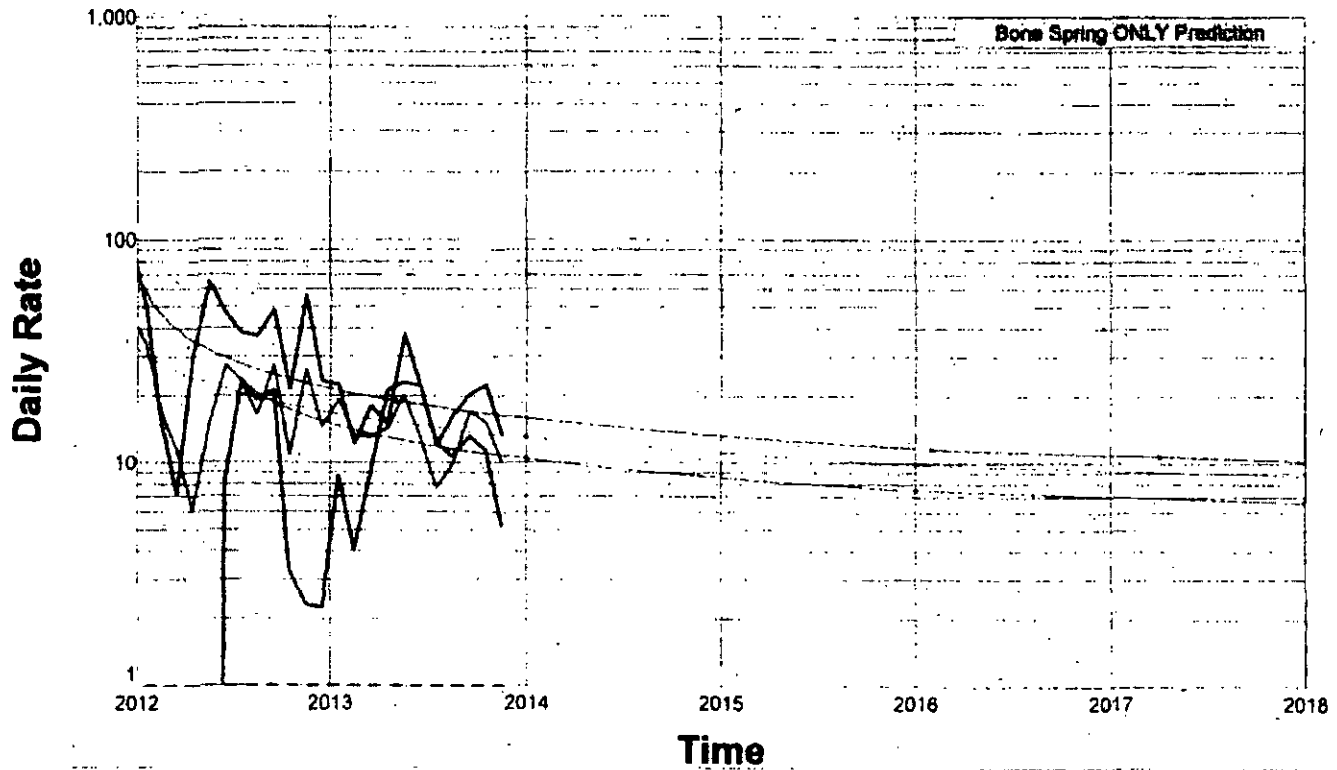


Date	Oil (bbl)	Gas (mcf)	Water (bbl)	Total Oil (bbl)	Total Gas (mcf)	Total Water (bbl)
09/2014	668	318	3,610	668	318	3,610
10/2014	661	314	3,583	1,329	631	7,193
11/2014	655	310	3,555	1,984	941	10,748
12/2014	649	306	3,528	2,633	1,247	14,276
01/2015	643	302	3,502	3,277	1,549	17,778
02/2015	637	299	3,475	3,914	1,848	21,253
03/2015	632	295	3,449	4,546	2,144	24,702
04/2015	626	292	3,424	5,172	2,436	28,126
05/2015	621	289	3,398	5,793	2,725	31,524
06/2015	616	286	3,373	6,409	3,011	34,897
07/2015	611	283	3,348	7,020	3,294	38,246
08/2015	606	280	3,324	7,625	3,574	41,569
09/2015	601	278	3,300	8,226	3,852	44,869
10/2015	596	275	3,276	8,822	4,127	48,145
11/2015	591	272	3,252	9,413	4,399	51,397
12/2015	587	270	3,229	10,000	4,669	54,625
01/2016	583	268	3,205	10,583	4,937	57,831
02/2016	579	267	3,183	11,162	5,204	61,014
03/2016	576	265	3,162	11,737	5,469	64,175
04/2016	572	264	3,140	12,309	5,732	67,315
05/2016	569	262	3,119	12,878	5,995	70,435
06/2016	290	222	341	13,168	6,216	70,776

MUD SLIDE SLIM 15 FEDERAL (BONE) - LEA

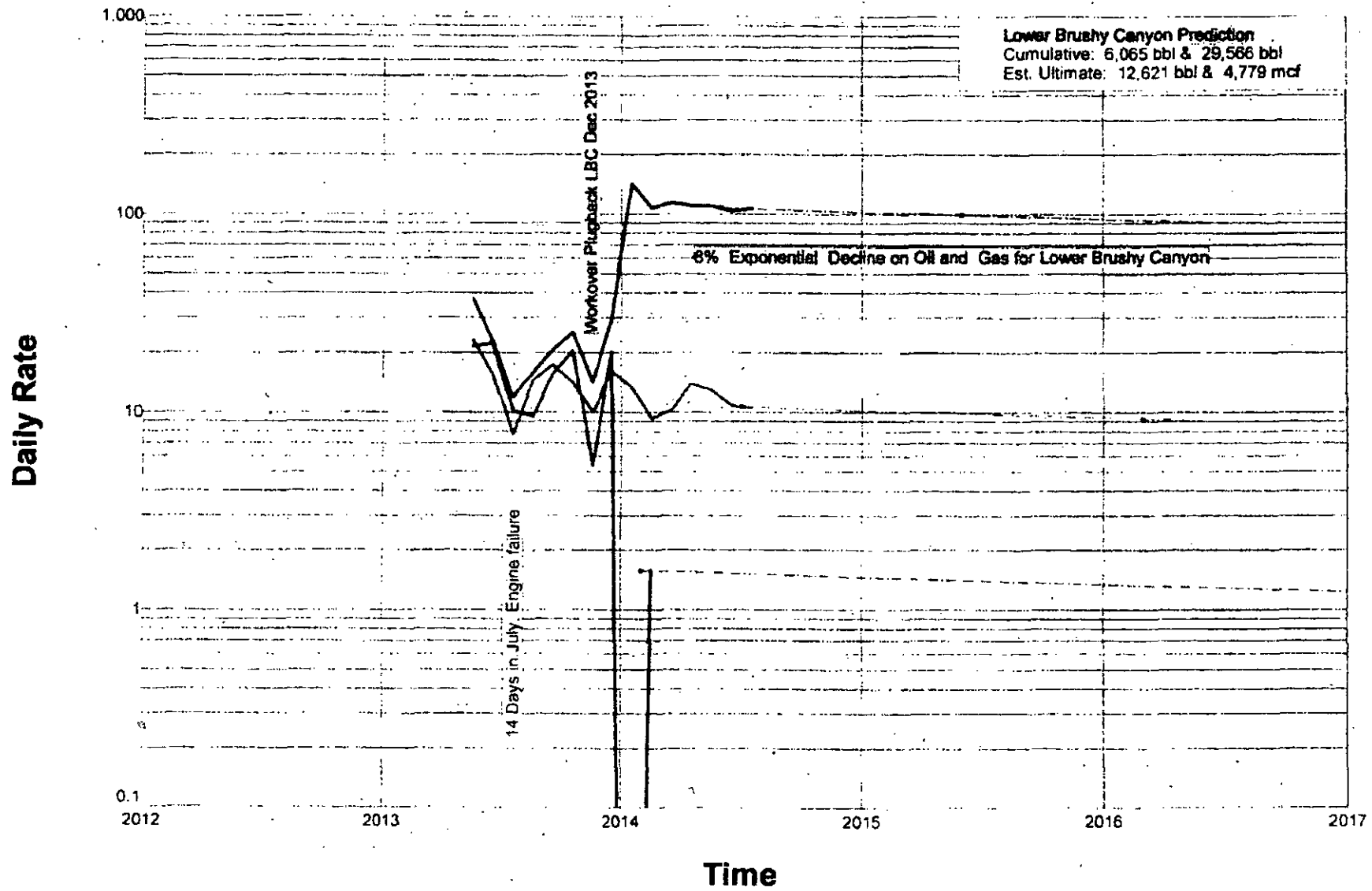


MUD SLIDE SLIM 15 FEDERAL (BONE) - 1 - LEA

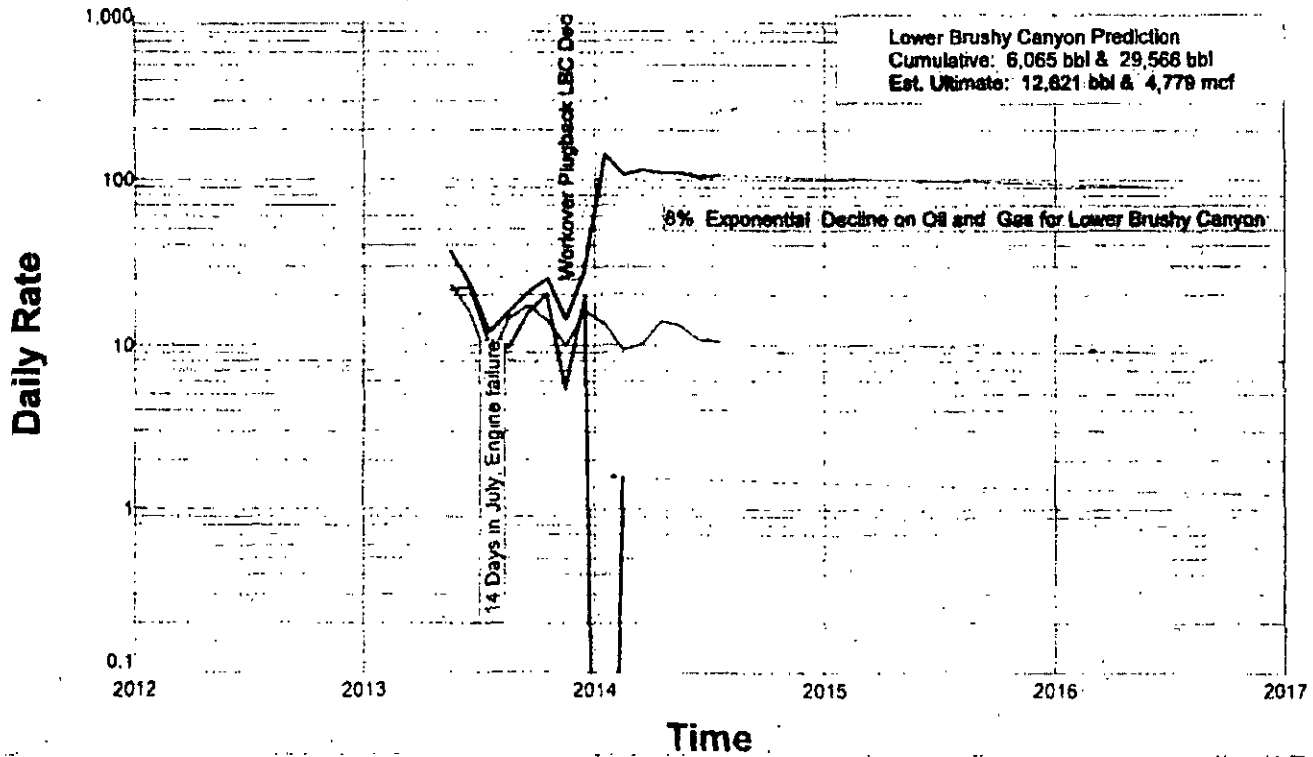


Date	Oil (bbl)	Gas (mcf)	Water (bbl)	Total Oil (bbl)	Total Gas (mcf)	Total Water (bbl)
09/2014	350	272	420	350	272	420
10/2014	346	269	414	695	541	834
11/2014	342	265	409	1,037	806	1,243
12/2014	338	262	404	1,375	1,068	1,647
01/2015	334	258	399	1,709	1,326	2,046
02/2015	330	255	394	2,039	1,581	2,440
03/2015	327	252	389	2,366	1,833	2,829
04/2015	323	249	385	2,689	2,082	3,214
05/2015	320	246	380	3,010	2,328	3,594
06/2015	317	243	376	3,327	2,571	3,971
07/2015	314	241	372	3,641	2,812	4,343
08/2015	311	238	368	3,952	3,051	4,711
09/2015	308	236	365	4,260	3,287	5,076
10/2015	305	234	361	4,565	3,520	5,437
11/2015	303	231	357	4,868	3,751	5,795
12/2015	300	229	354	5,168	3,981	6,149
01/2016	298	227	351	5,466	4,208	6,499
02/2016	296	226	348	5,762	4,434	6,848
03/2016	295	225	346	6,057	4,659	7,184
04/2016	293	224	345	6,351	4,883	7,539

Mudslide Slim 15 # 1 - LYNCH - Lower Brushy Canyon



Mudslide Slim 15 # 1 - LYNCH - Lower Brushy Canyon



Date	Oil (bbl)	Gas (mcf)	Water (bbl)	Total Oil (bbl)	Total Gas (mcf)	Total Water (bbl)
09/2014	318	45	3,190	318	45	3,190
10/2014	316	45	3,168	634	90	6,358
11/2014	314	45	3,146	947	135	9,505
12/2014	311	44	3,124	1,259	180	12,629
01/2015	309	44	3,103	1,568	224	15,732
02/2015	307	44	3,081	1,875	267	18,813
03/2015	305	43	3,080	2,180	311	21,873
04/2015	303	43	3,039	2,483	354	24,912
05/2015	301	43	3,018	2,784	397	27,930
06/2015	299	43	2,997	3,083	440	30,926
07/2015	297	42	2,976	3,379	482	33,902
08/2015	295	42	2,955	3,674	524	36,858
09/2015	293	42	2,935	3,966	565	39,793
10/2015	291	41	2,915	4,257	607	42,708
11/2015	289	41	2,895	4,546	648	45,602
12/2015	287	41	2,874	4,832	689	48,477
01/2016	285	41	2,855	5,117	729	51,331
02/2016	283	40	2,835	5,399	770	54,166
03/2016	281	40	2,815	5,680	809	56,981
04/2016	279	40	2,796	5,959	849	59,777



LABORATORY

www.permianls.com

575.397.3713 2609 W Marland Hobbs NM 88240

For: Caza Operating
Attention: Richard Wright
200 N. Lorraine, Suite 1550
Midland, Texas 79701

Sample: Meter Run
Identification: Mudslide 15 Fed. #1
Company: Caza
Lease:
Plant:

Sample Data: Date Sampled 8/22/2014 3:18 PM
Analysis Date 8/25/2014
Pressure-PSIA
Sample Temp F
Atmos Temp F 99

Sampled by: Logan McIlroy
Analysis by: Vicki McDaniel

H2S =

0

DELAWARE LWA BRUSHY GAS

Component Analysis

		Mol Percent	GPM
Hydrogen Sulfide	H2S	0.000	
Nitrogen	N2	7.746	
Carbon Dioxide	CO2	0.052	
Methane	C1	63.630	
Ethane	C2	11.780	3.142
Propane	C3	8.803	2.419
I-Butane	IC4	1.252	0.409
N-Butane	NC4	3.345	1.052
I-Pentane	IC5	1.032	0.376
N-Pentane	NC5	0.979	0.354
Hexanes Plus	C6+	<u>1.381</u>	<u>0.598</u>
		100.000	8.350

REAL BTU/CU.FT.

At 14.65 DRY	1376.2
At 14.65 WET	1352.2
At 14.696 DRY	1380.5
At 14.696 WET	1357.0
At 14.73 DRY	1383.7
At 14.73 Wet	1359.8

Specific Gravity

Calculated 0.8713

Molecular Weight 25.2342

Z Factor (DRY) 0.9952

Z Factor (WET) 0.9947



LABORATORY SERVICES
Natural Gas Analysis

www.permianls.com

575.397.3713 2609 W Marland Hobbs NM 88240

ASTM DISTILLATION

Caza Operating
Attention: Richard Wright
200 N. Lorraine, Suite 1550
Midland, Texas 79701

DELAWARE

Sampled By: Logan McIlroy
Sample Date: 8/22/14

LWR Brushy oil

Sample ID: Mudslide 15 Fed. #1

Percent Distilled

Temperature

IBP
5
10
20
30
40
50
60
70
80
90
EP

100
150
194
251
326
409
512
601
680
709
735
740

%Recovered = 93.0
% Residue = 4.0
% Loss = 3.0

Total Sulfur

API Gravity

Specific Gravity

RVP

0.1949 wt. %

41.4

0.8183

Distillation ASTM D 86

Sulfur ASTM D 2622

Gravity ASTM D 287

Vapor Pres ASTM D 323



LABORATORY
Natural Gas Analysis

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575.397.3713 2609 W Marland Hobbs, NM 88240

For: Caza Operating
Attention: Richard Wright
200 N. Lorraine, Suite 1550
Midland, Texas 79701

Sample: Meter Run
Identification: Mudslide Slim 15 Fed #1
Company: Caza Operating
Lease:
Plant:

Sample Data: Date Sampled 5/14/2012
Analysis Date 5/15/2012
Pressure-PSIA 13.2
Sample Temp F 78.4
Atmos Temp F 62

Sampled by: Dustin Armstrong
Analysis by: Vickie Sullivan

H2S = 10 PPM

BONE SPRINGS GAS

Component Analysis

		Mol Percent	GPM
Hydrogen Sulfide	H2S	0.001	
Nitrogen	N2	2.326	
Carbon Dioxide	CO2	4.424	
Methane	C1	57.701	
Ethane	C2	15.016	4.006
Propane	C3	10.889	3.020
I-Butane	IC4	1.422	0.464
N-Butane	NC4	4.158	1.307
I-Pentane	IC5	0.985	0.359
N-Pentane	NC5	1.097	0.397
Hexanes Plus	C6+	1.881	0.814
		100.000	10.367

REAL BTU/CU.FT.

At 14.65 DRY 1491.4
At 14.65 WET 1465.3
At 14.696 DRY 1496.0
At 14.696 WET 1470.6
At 14.73 DRY 1499.4
At 14.73 Wet 1473.6

Specific Gravity
Calculated

0.9569

Molecular Weight

27.7145



Laboratory Services, Inc.
2009 W. Marland
Hobbs, New Mexico 88240
Telephone: (575) 397-3713

ASTM DISTILLATION

Caza Operating LLC
200 N. Lorraine, Suite 1550
Midland, Texas 79701

Sample Date: 8/10/09
Sampled By: Will McDaniel

BONE SPRINGS Oil

Mud Slide Slim 15 Fed. #1

Percent DistilledTemperature

IBP	108
5	177
10	212
20	262
30	325
40	408
50	500
60	583
70	647
80	674
90	717
EP	720

% Recovered = 94.0
% Residue = 4.0
% Loss = 2.0

API Gravity @ 60° F = 39.1

Thank You,

Vicki McDaniel



Laboratory Services, Inc.
2609 W. Marland
Hobbs, New Mexico 88240
Telephone: (575) 387-3713

SULFUR IN CRUDE OIL

Caza Operating LLC
200 N. Lorraine, Suite 1550
Midland, Texas 79701

Bone Springs Oil

Jun 10, 2009

	Total Sulfur	API Gravity @ 60° F	Specific Gravity @ 60° F
Mud Slide Slim 16 Fed. #1	0.1656 wt. %	39.1	0.8294

Thank You,
Vickie Sullivan

Proposed Delaware/Bone Spring Producer.

Mud Slide Slim 15 Fed # 1-Well Bore Schematic 3-2013
API # 30 025 38489-Lea County, New Mexico
Caza Operating, LLC-249099

KB=20'. GR=3,642'

Surface Hole 17.5"-1621'
Mud=WB-9.2 ppg

Inter Hole=12.25"-5,525'
Mud = WB Brine-10.1 ppg

Surface Csg: 1,621'
Cement Data:

13-3/8" 54 5 J-55
Lead: 1050 Sks 35:65:8 Poz-C +
additives
Tail: 1200 sks "C" + 2% Caci2
Circulated 383 sks.

TOC 5-1/2" csg @ 2,958' CBL

Intermediate Csg: 5,525'
Cement Data:
Stg tool 3546'-CP@3,591'

9-5/8" 40.0# N-80 & P-110
1st stg: Lead-330 "C" 35:65:8+
Tail w/ 200 sks "C" + 1% caci2
2nd stg: Lead-1245 sks "C" 35:65:8
Tail w/ 100 sks "C" + 1% caci2
Circulate 78 sks to surface

TAC 8094' EOT 8260
Lwr Delaware 8291-8306 11-29-13
Frac'd 12-16-13

5.5" stg tool @ 8,512'

Avalon perms 8,802'-8,864' -Squeezed 4-18-12

Proposed TAC 9284
ft EOT 9450 ft

Avalon perms 9,184'-9,037' Squeezed 4-18-12
Avalon perms 9,302'-8,242' Squeezed 4-18-12
1st Bone perf 9,488'-8,536' TA 10-7-11
Frac 10-14-11

Tbg stub above pkr @ 9,710'

Abandon Pkr 2-23-11

Arrow pkr

10,838

2nd Bone perf 9,836-9,854 TA "Csg Collapse" 5-12-09
Frac 5-20-09

CIP=20'cm

11,420

3rd Bone perf 10,910-10,925 TA
Frac 2-11-11

CIBP=25'cm

11,500

2/1/2011

11/29/2011

CIBP=20'cm

13,025

5-12-09

Prod Hole=8.5"-12,496'
Prod Hole=7.875"-13,514'
Mud = WBM-10.35 ppg

TD 13,514'
Prod Csg: 13,514'

Cement Data: Stg tool @ 8512'
Morrow Perfs: 13,395-13,047' (5-6-08)
Frac 5-7-08

5-1/2" 20#L & 17#P
1st stg: 1600 sks "H" 15.7ppg+
additives Circ 248 sks
2nd stg: 1200 sks "C" 14.1ppg+
8 pps Gilsomite
TOC 2,958' CBL

JAMES BRUCE
ATTORNEY AT LAW

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(505) 660-6612 (Cell)
(505) 982-2151 (Fax)

jamesbruce@aol.com

January 28, 2015

Michael McMillan
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Caza Operating DHC application

Dear Mike:

I have examined title to the S/2NW/4 of Section 15, Township 20 South, Range 34 East, N.M.P.M., which is covered by Federal Lease NM 99048. A Serial Register for the lease is attached. Ownership of royalty, overriding royalty, and working interests is common in the acreage. Therefore, notification of the DHC application is not required.

Very truly yours,



James Bruce

**DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CASE RECORDATION
(MASS) Serial Register Page**

Run Time: 10:11 AM

Page 1 of 2

Run Date: 01/28/2015

01 12-22-1987;101STAT1330;30USC181 ET SE
Case Type 312021: O&G LSE COMP PD -1987
Commodity 459: OIL & GAS
Case Disposition: AUTHORIZED

Total Acres 280.000
Serial Number NMNM-- - 099048

Serial Number: NMNM-- - 099048

Name & Address	Int Rel	% Interest
CAZA PETROLEUM INC	OPERATING RIGHTS	0.00000000
DEVON ENERGY PROD CO LP	LESSEE	50.00000000
EG3 INC	OPERATING RIGHTS	0.00000000
NEARBURG EXPL CO LLC	LESSEE	50.00000000
THE ALLAR CO	OPERATING RIGHTS	0.00000000
WISE OIL & GAS NO 6 LTD	OPERATING RIGHTS	0.00000000

Serial Number: NMNM-- - 099048

Mer Twp Rng Sec	STyp	SNr Suff	Subdivision	District/Field Office	County	Mgmt Agency
23 0200S 0340E 015	ALIQ		NW1/2SW,SESW;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT

Serial Number: NMNM-- - 099048

Act Date	Code	Action	Action Remark	Pending Office
07/15/1997	387	CASE ESTABLISHED	9707060	
07/16/1997	191	SALE HELD		
07/16/1997	267	BID RECEIVED	\$92400.00;	
07/16/1997	392	MONIES RECEIVED	\$560.00;	
07/29/1997	392	MONIES RECEIVED	\$91840.00;	
08/07/1997	237	LEASE ISSUED		
08/07/1997	974	AUTOMATED RECORD VERIF	LBQ	
08/15/1997	600	RECORDS NOTED		
09/01/1997	496	FUND CODE	05;145003	
09/01/1997	530	RLTY RATE: 12 1/2%		
09/01/1997	868	EFFECTIVE DATE		
09/10/1997	084	RENTAL RECEIVED BY ONRR	\$420.00;11/MULTIPLE	
09/26/1997	140	ASGN FILED	PENWELL/NEARBURG	
10/07/1997	139	ASGN APPROVED	EFF 10/01/97;	
10/07/1997	974	AUTOMATED RECORD VERIF	MV/MV	
06/03/1998	963	CASE MICROFILMED		
07/13/1998	084	RENTAL RECEIVED BY ONRR	\$420.00;21/0000000022	
01/25/1999	899	TRF OF ORR FILED		
02/10/1999	140	ASGN FILED	PENWELL/CONCHO	
03/12/1999	139	ASGN APPROVED	EFF 03/01/99;	
03/12/1999	974	AUTOMATED RECORD VERIF	LR	
08/09/1999	084	RENTAL RECEIVED BY ONRR	\$420.00;21/0000000079	
08/14/2000	084	RENTAL RECEIVED BY ONRR	\$420.00;21/164	
07/16/2001	084	RENTAL RECEIVED BY ONRR	\$420.00;21/231	
08/16/2001	817	MERGER RECOGNIZED	CONCHO RES/DEVON ENE	
08/01/2007	246	LEASE COMMITTED TO CA	CA NM118917	
08/01/2007	677	SUS OPS OR PROD/PMT REQD		
08/15/2007	673	SUS OPS/PROD APLN FILED		
08/27/2007	974	AUTOMATED RECORD VERIF	BO	
01/01/2008	235	EXTENDED	THRU 02/02/2008;	
01/01/2008	678	SUSP LIFTED		
06/03/2008	650	HELD BY PROD - ACTUAL	/1/	
09/24/2008	643	PRODUCTION DETERMINATION	/1/	

NO WARRANTY IS MADE BY BLM FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM

**DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CASE RECORDATION
(MASS) Serial Register Page**

Run Time: 10:11 AM

Page 2 of 2

Run Date: 01/28/2015

09/24/2008	658	MEMO OF 1ST PROD-ACTUAL	/1/MUD SLIDE SLIM 15;
02/26/2009	932	TRF OPER RGTS FILED	DEVON ENE/PURA VIDA;1
05/08/2009	933	TRF OPER RGTS APPROVED	EFF 03/01/09;
05/08/2009	974	AUTOMATED RECORD VERIF	MV
05/28/2009	932	TRF OPER RGTS FILED	NEARBURG/PURA VIDA;1
05/31/2009	235	EXTENDED	THRU 05/31/2011;
05/31/2009	522	CA TERMINATED	CA NM-118917
07/29/2009	933	TRF OPER RGTS APPROVED	EFF 06/01/09;
07/29/2009	974	AUTOMATED RECORD VERIF	MV
09/18/2009	899	TRF OF ORR FILED	1
09/18/2009	932	TRF OPER RGTS FILED	PURA VIDA ENE/ALLAR;1
12/11/2009	933	TRF OPER RGTS APPROVED	EFF 10/01/09;
12/11/2009	974	AUTOMATED RECORD VERIF	RAYO/RAYO
01/26/2010	932	TRF OPER RGTS FILED	WISE OIL/NEUMIN OI;1
02/26/2010	933	TRF OPER RGTS APPROVED	EFF 02/01/10;
02/26/2010	974	AUTOMATED RECORD VERIF	SSP
03/26/2010	932	TRF OPER RGTS FILED	ALLAR CO/EG3 INC;1
06/15/2010	933	TRF OPER RGTS APPROVED	04/01/2010;
06/15/2010	974	AUTOMATED RECORD VERIF	MJD
07/13/2011	974	AUTOMATED RECORD VERIF	BCO
10/29/2014	932	TRF OPER RGTS FILED	NEUMIN OI/CAZA PETR;1
11/05/2014	933	TRF OPER RGTS APPROVED	EFF 11/01/14;
11/05/2014	974	AUTOMATED RECORD VERIF	LBO

Serial Number: NMNM-- - 099048

Line Nr	Remarks
0002	-
0003	05/08/09 NEARBURG EXPL BONDED LESSEE NMB000153/SW
0004	06/15/2010 OPERATOR BOND CAZA PETRO NMB000471 SW
0005	11/5/14 BONDED OPERATOR
0006	CAZA OPERATING LLC SW/NM NMB000471 \$25K;

McMillan, Michael, EMNRD

From: jamesbruc@aol.com
Sent: Wednesday, January 28, 2015 9:40 AM
To: McMillan, Michael, EMNRD
Subject: Re: Caza DHC

Mike: these are the numbers that have been transmitted to the OCD:

September 17, 2014 downhole commingling application [page 16-Allocation Spreadsheet]: average of actual production):

Bone Spring production: last production month (November, 2013): 14 BOPD ave.,

Delaware production: the most recent production month (August, 2014): 9.47 BOPD ave.

14 BO Bone Spring + 9.47 BO Delaware = 23.47 BO total

14 BO-Bone Spring/23.47 BO total Bone Spring + Delaware = 59.65% Bone Spring allocation

9.47 BO-Delaware/23.47 BO total Bone Spring + Delaware = 40.35% Delaware allocation

Rounded off to 60/40.

January 2015 info from Tony Sam, Caza's operations (numbers estimated from production graph, 2 years for Bone Spring, 1 year for Delaware):

Bone Spring production 2012-2013 estimate: 14 BOPD

Delaware production 2014 estimate: 10 BOPD

14 BO Bone Spring + 10 BO Delaware = 24 BO total

14 BO-Bone Spring/24 BO total Bone Spring + Delaware = 58.33% Bone Spring allocation

10 BO-Delaware/24 BO total Bone Spring + Delaware = 41.67% Delaware allocation

The difference between these two sets of numbers is that the allocations in the September 17, 2014 application are based on the most recent 1 month production from each respective zone, while the allocations in January 2015 are estimated off a standard production graph of the then current total life of each zone production.

We apologize for providing OCD with 2 different sets of production numbers and it make no difference to Caza which are used.

PS: Caza TA'd the Bone Spring interval to isolate and test the Delaware with the intention of downhole commingling the 2 zones to increase the total production and commerciality of a low volume well (thereby increasing the ultimate recovery of the well in which the State of NM participates).

LET ME KNOW HOW YOU WOULD LIKE US TO HANDLE IT? REVISE THE C-107A?

Thanks,

Jim

-----Original Message-----

From: McMillan, Michael, EMNRD, EMNRD <Michael.McMillan@state.nm.us>

To: jamesbruc <jamesbruc@aol.com>

Cc: Goetze, Phillip, EMNRD, EMNRD <Phillip.Goetze@state.nm.us>

Sent: Tue, Jan 27, 2015 11:26 am

Subject: RE: Caza DHC

Jim:

If I do not get the information by the end of the day tomorrow-I will cancel your application, and you will have to start over.

Mike

From: jamesbruc@aol.com [<mailto:jamesbruc@aol.com>]

Sent: Tuesday, January 13, 2015 11:09 AM