

# **THE OIL CONSERVATION COMMISSION**

**CASE NO. 14001 & 14002**

# **EXHIBIT**

# **23**



Date November 1, 2007

Mark E. Fesmire, P.E.  
Director  
Oil Conservation Division  
New Mexico Department of Energy,  
Minerals and Natural Resources  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

Re: Application of Chesapeake Operating, Inc. for Enhanced Oil Recovery Project Qualification for the Recovered Oil Tax Rate at the Quail Queen Unit, Lea County, New Mexico.

Dear Mr. Fesmire:

Chesapeake Operating, Inc. ("Chesapeake"), hereby makes application to qualify the Quail Queen Unit for the recovered oil tax rate as authorized by the Enhanced Oil Recovery Act. Chesapeake plans to commence waterflood operations in the project area during the 1st quarter of 2008. Chesapeake is making application pursuant to the rules promulgated by Oil Conservation Commission Order No. R-9708 entered on August 27, 1992.

In accordance with this Order, Chesapeake Energy Corporation provides the following information:

**A. Operator's name and address:**

Chesapeake Operating Inc.  
6100 No. Western Ave.  
Oklahoma City, Oklahoma 73154

**B. Description of the project area:**

1. Exhibit "A" is a plat outlining the project area
2. The following acreage is located in the project area:

**TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM**

Section 11:	E/2, SW/4
Section 13:	W/2 NW/4, NW/4 SW/4
Section 14:	NE/4, N/2 NW/4

BEFORE THE OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

Case No. 14001 & 14002 De Novo

(Consolidated).....Exhibit No. 23

Submitted by:

CHESAPEAKE EXPLORATION, L.L.C.

Hearing Date: August 14, 2008

The proposed project will impact 100% of the Unit area and is more accurately identified as the injection patterns highlighted on Exhibit "A", which includes the wells listed on Exhibit "B".

3. Total acres:

The Quail Queen Unit contains a total of 840, acres more or less.

Chesapeake is targeting 840 acres for this enhanced oil recovery project. All acreage in the Unit Area will be impacted by the initial phase of injection.

4. Subject pool and formation:

The Quail Queen Unit is within the Quail Queen Pool.

The unit includes the Queen formation.

Exhibit "C" is the type-log identified in the Unit Agreement.

**C. Status of operations in the project area:**

1. The name of the Unit is the Quail Queen Unit.
2. The wells in the proposed unit are producing on primary decline.

**D. Method of recovery to be used:**

**Secondary recovery by water injection.**

1. Identify fluids to be injected:  
Produced Water from the unit wells and make-up water produced from Queen producing wells.

**E. Description of the project:**

1. List of producing wells:

Attach as Exhibit "B" a list of all producing wells within the project area -- provide locations by footage location, section, township and range.

There are plans to drill approximately two additional development wells within the project area.

2. List of injection wells:

Attach as Exhibit "B" a list of all injection wells within the project area -- provide locations by footage location, section, township and range.

3. Capital costs of additional facilities:

Description	Cost
Field installations and upgrades	\$ 1,250,000
Development drilling cost	\$ 2,200,000
Well remediation & misc. costs	\$ 325,000
Injection work	<u>\$ 1,220,360</u>

4. Total project costs: \$4,995,360

5. Estimated total value of the additional production that will be recovered as a result of this project:

Using an average price for the oil of \$ 70 and an equivalent barrel based price for the gas, the value of the additional hydrocarbons to be produced from the proposed project (725 M STBO ) is \$ 40,207,550 (Total Sales) and \$27,060,560 net income to the working interest owners.

6. The anticipated date for commencement of injection:

May 1, 2008

7. Identify the fluid to be injected and the anticipated volumes:

2,000 barrels of produced and makeup water as needed per well per day

8. Production Data:

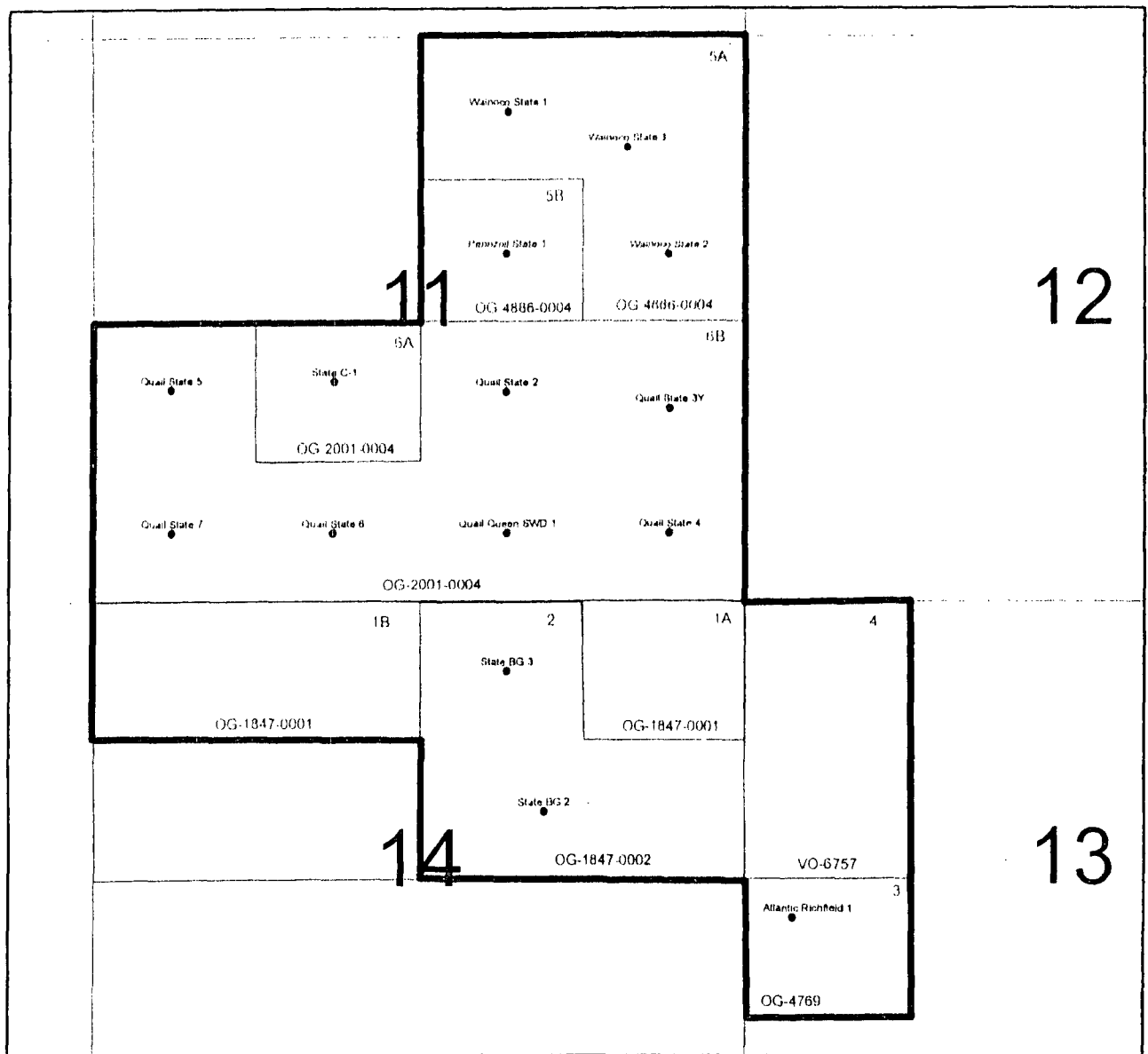
Exhibit "D" is a graph with supporting data attached thereto which shows the production and injection history for the project and a forecast of the enhanced recovery of oil, gas, casinghead gas and water anticipated from this project.

Chesapeake Operating, Inc. requests that this application be set for hearing and, if no objections are received, that it be approved.

Very truly yours,  
CHESAPEAKE OPERATING, INC.

By: 

- Exhibit A: Plat of Project Area
- Exhibit B: Table of Wells in the Project Area
- Exhibit C: Type Log
- Exhibit D: Historical Production Curve and Production Forecast



TOWNSHIP 19 SOUTH, RANGE 34 EAST  
LEA COUNTY, NEW MEXICO

PROPOSED QUAIL QUEEN UNIT  
CHESAPEAKE EXPLORATION, L.L.C.,



Proposed Waterflood Unit Boundary



Queen Wells

☐ Federal Acreage = 0 acres

☐ State Acreage = 840 acres

☐ Fee Acreage = 0 acres

Total Acreage = 840 acres

### Redesignation of Well Names

Quail Queen Unit  
Lea County, New Mexico

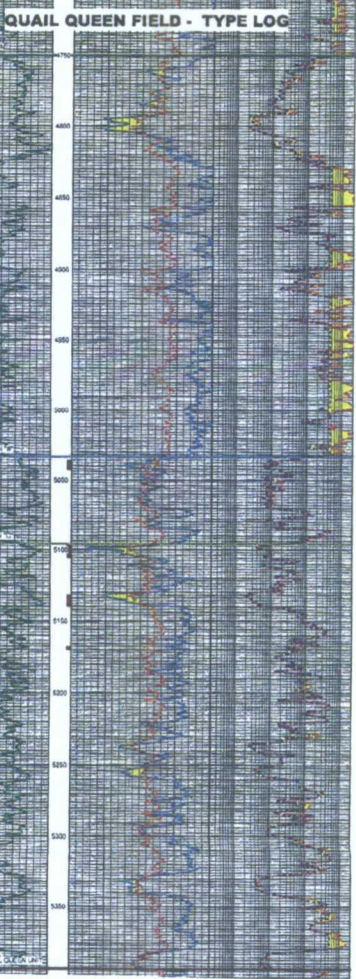
API#	Section 11-19S-34E	New Name	Location	Unit
3002525536	Quail Queen SWD 1(Inj)	QQU 11-1	SW SE	O
3002525868	Quail State 2	QQU 11-2	NW SE	J
3002526221	Quail State 3Y (Inj)	QQU 11-3	NE SE	I
3002526473	Quail State 4	QQU 11-4	SE SE	P
3002526783	Quail State 5 (T/A)	QQU 11-5	NW SW	L
3002526853	Quail State 6	QQU 11-6	SE SW	N
3002527096	Quail State 7 (T/A)	QQU 11-7	SW SW	M
3002523031	State C-1 (Inj)	QQU 11-8	NE SW	K
3002525887	Wainoco State 1	QQU 11-9	NW NE	B
3002526348	Wainoco State 2	QQU 11-10	SE NE	H
3002526707	Wainoco State 3 (Inj)	QQU 11-11	NE NE	A
3002522841	Pennzoil State 1 (Inj)	QQU 11-12	SW NE	G

#### Section 13-19S-34E

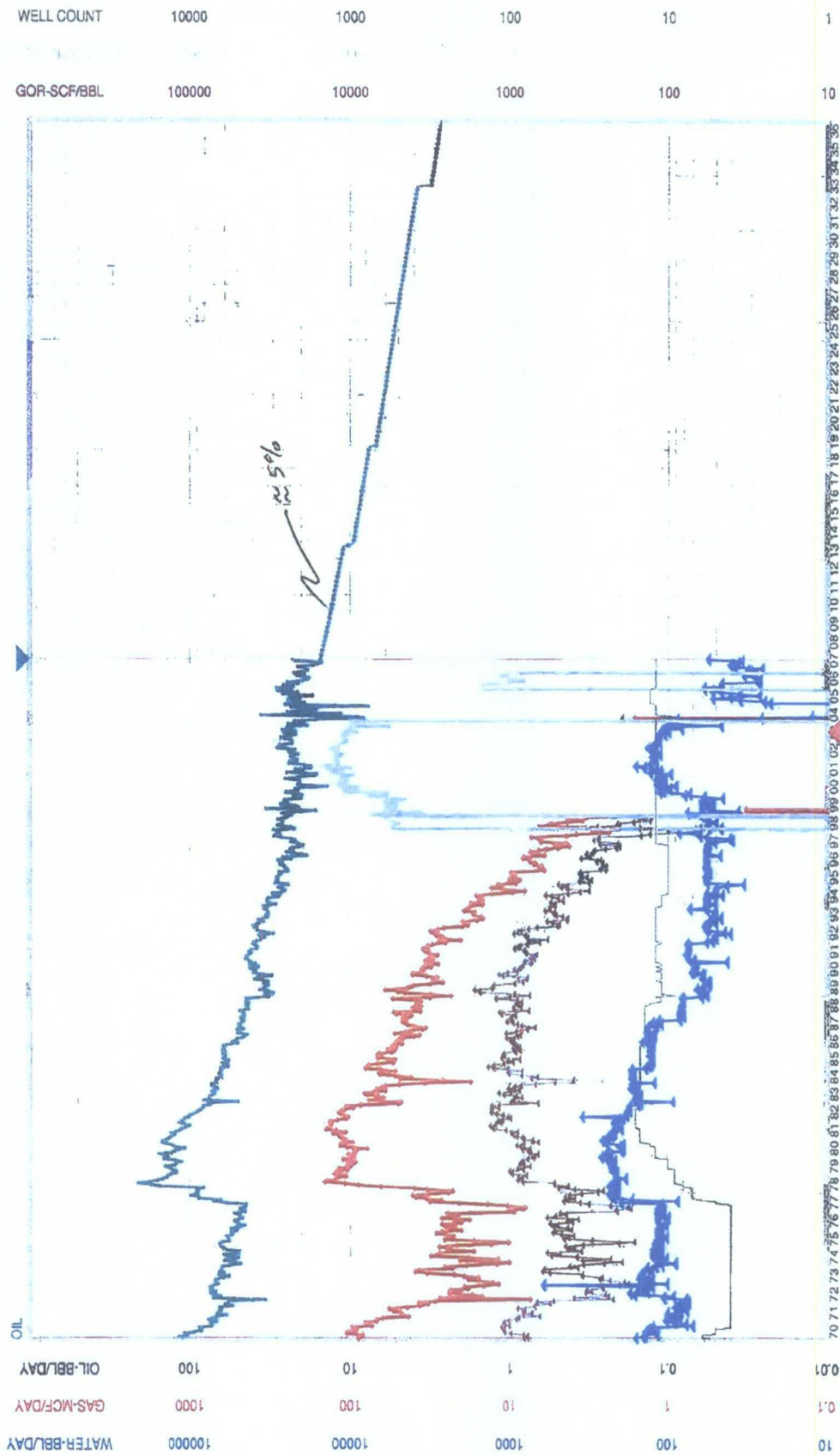
3002522519	Atlantic Richfield 1	QQU 13-1	NW SW	L
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#### Section 14-19S-34E

3002525493	State BG 2 (Inj)	QQU 14-1	SW NE	G
3002525506	State BG 3	QQU 14-2	NW NE	B



**QUAIL TOTAL FIELD**  
12 ACTIVE WELLS PLUS  
8 INACTIVE WELLS



YEAR

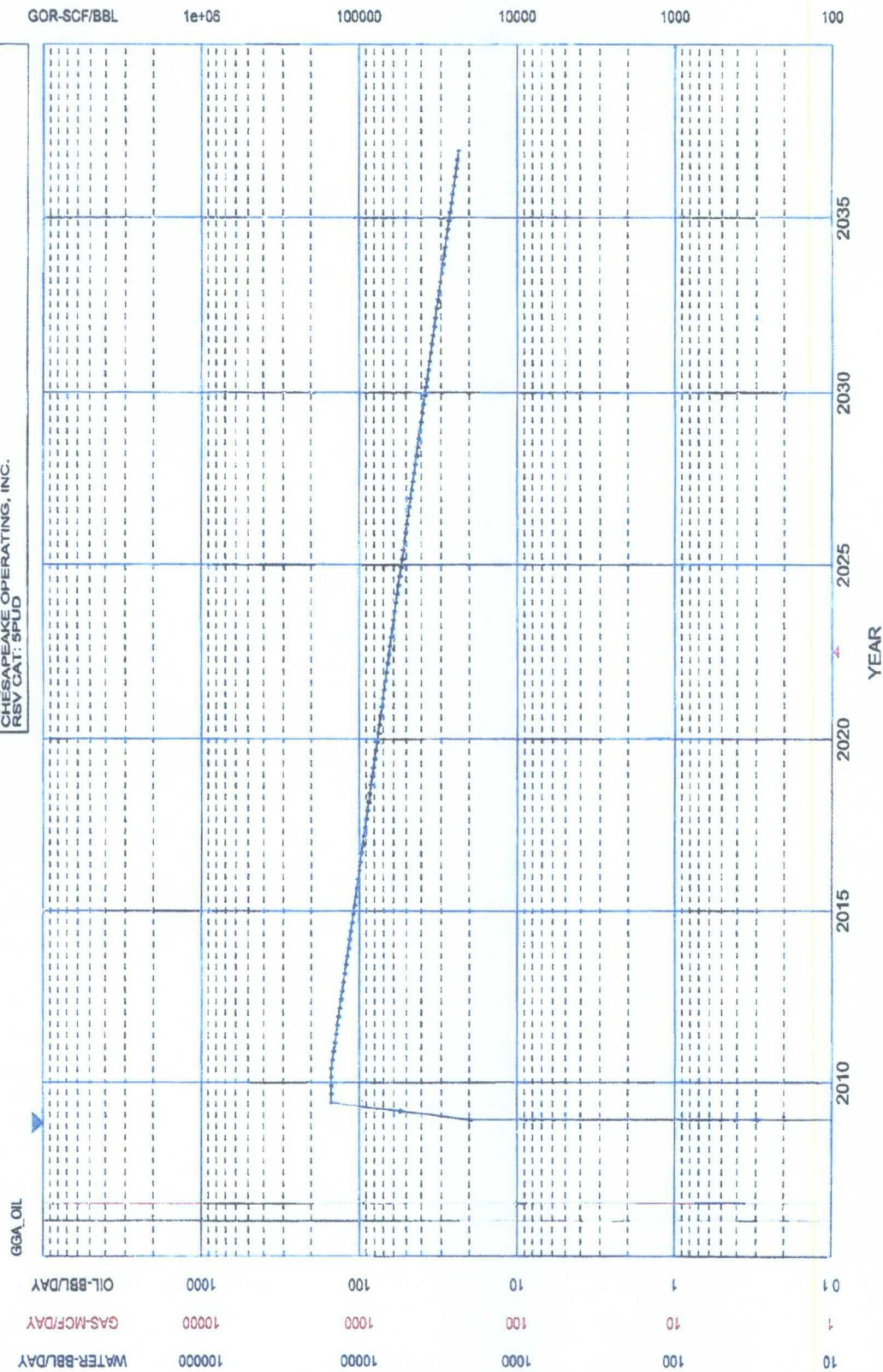
OIL-BBL/DAY				GAS-MCF/DAY				WATER-BBL/DAY				GOR-SCF/BBL				WATER INJ-BB				WELL COUNT			
Qual=	7/2007	Ref=	7/2007	Qual=	7/2007	Ref=	7/2007	Qual=	7/2007	Ref=	7/2007	Qual=	7/2007	Ref=	7/2007	Qual=	7/2007	Ref=	7/2007	Qual=	7/2007	Ref=	7/2007
Cum=	798248	Rem=	78720	Cum=	0	Rem=	0	Cum=	0	Rem=	0	Cum=	0	Rem=	0	Cum=	0	Rem=	0	Cum=	0	Rem=	0
EUR=	877968	EUR=	31.663	EUR=	0	EUR=	0	EUR=	0	EUR=	0	EUR=	0	EUR=	0	EUR=	0	EUR=	0	EUR=	0	EUR=	0
Yrs=	31.663	Yrs=	8.4	Yrs=	0.000	Yrs=	0.000	Yrs=	0.000	Yrs=	0.000	Yrs=	0.000	Yrs=	0.000	Yrs=	0.000	Yrs=	0.000	Yrs=	0.000	Yrs=	0.000
De=	0.000000	De=	0.000	De=	0.000000	De=	0.000	De=	0.000000	De=	0.000	De=	0.000000	De=	0.000	De=	0.000000	De=	0.000	De=	0.000000	De=	0.000
Dmin=	0.000000	Dmin=	0.000	Dmin=	0.000000	Dmin=	0.000	Dmin=	0.000000	Dmin=	0.000	Dmin=	0.000000	Dmin=	0.000	Dmin=	0.000000	Dmin=	0.000	Dmin=	0.000000	Dmin=	0.000
b=	0.000000	b=	0.0	b=	0.000000	b=	0.0	b=	0.000000	b=	0.0	b=	0.000000	b=	0.0	b=	0.000000	b=	0.0	b=	0.000000	b=	0.0
Qab=	0.0	Qab=	0.0	Qab=	0.0	Qab=	0.0	Qab=	0.0	Qab=	0.0	Qab=	0.0	Qab=	0.0	Qab=	0.0	Qab=	0.0	Qab=	0.0	Qab=	0.0

70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36



# SEQ #:1380 QUAIL QUEEN UNIT WATERFLOOD CASE

QUAIL  
LEA NM  
UNSTEAK OPERATING, INC.  
RSV CAT: 5PUD



OIL-BBL/DAY	GAS-MCF/DAY	WATER-BBL/DAY	GOR-SCF/BBL
Qual=	Ref=	Ref=	Ref=
GGA0306	11/2008	11/2008	11/2008
Cum=	Cum=	Cum=	Cum=
725081	0	0	0
EUR=			
28.164			
Yrs=			
0.0			
De=			
0.000000			
Drin=			
b=			
0.000000			
Qab=			
23.1			