DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.
3/29/2017		MAM	3/29/2017	DHC 4800-A	pKSC1708857793

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]

Called Kelly 4/5/17 asking for REVISED percentages

RECEIVED OCD 2017 MAR 29 P 1:50

[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 _____ Read & Stevens Inc. (18917)

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply Toles Federal #1 30-005-60782 Diamond Mound; Strawn (96984) Diamond Mound; Upper Penn. (G) (97223)

[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.

Rory McMinn		President	3/27/2017
Print or Type Name	Signature	Title	Date

Kelly Boraffos 575-624-3760

rmcminn@readoperating.com
e-mail Address

District I
1625 N. French Drive, Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Form C-107A
Revised August 1, 2011

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

APPLICATION FOR DOWNHOLE COMMINGLING

Read & Stevens, Inc. — Operator
P. O. Box 1518, Roswell, NM 88202-1518 — Address

Toles Federal	#1	O, Section 34, T15S-R27E	Chaves
Lease	Well No.	Unit Letter-Section-Township-Range	County

OGRID No. 18917 Property Code 9576 API No. 30-005-60782 Lease Type: ✓ Federal ___ State ___ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	UPPER Diamond Mound; Pennsylvanian (Gas)	Diamond Mound; Strawn (Gas)	Diamond Mound; Morrow (Gas)
Pool Code	97223	96984	76079
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	7640' -7649'	8214'	8720'-8732', 8695.5', and 8699'
Method of Production (Flowing or Artificial Lift)	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)	+/- 3000 psi	+/- 3000 psi	+/- 3000 psi
Oil Gravity or Gas BTU (Degree API or Gas BTU)			
Producing, Shut-In or New Zone	New Zone	New Zone	Existing Producing Zone
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: NA Rates:	Date: NA Rates:	Date: 7/31/2012 Rates: +/- 5 MCFD
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil 98 % ✓ Gas 98 %	Oil 2 % ✓ Gas 2 %	Oil 48.3 % Gas 48.3 %

per Kelly

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 ✓ (NA)

NMOCD Reference Case No. applicable to this well: pMAM1632046320

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 _____ TITLE President DATE 03/27/2017

TYPE OR PRINT NAME Rory McMinn Kelly Barajas TELEPHONE NO. (575) 624-3764 575 624-3760

E-MAIL ADDRESS rmcminn@readoperating.com

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 Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-102
August 1, 2011

Permit 233835

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number	2. Pool Code	3. Pool Name
30-005-60782	96984	DIAMOND MOUND; STRAWN (G)
4. Property Code	**5. Property Name**	**6. Well No.**
9576	TOLES FEDERAL	001
7. OGRID No.	**8. Operator Name**	**9. Elevation**
18917	READ & STEVENS INC	3518

10. Surface Location

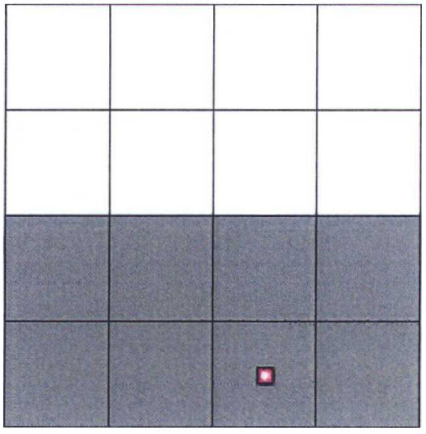
UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
O	34	15S	27E		660	S	1980	E	CHAVES

11. Bottom Hole Location If Different From Surface

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County

12. Dedicated Acres	13. Joint or Infill	14. Consolidation Code	15. Order No.
320.00			

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



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(s) 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.

E-Signed By:
Title: Pres.
Date: 3-27-2017

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.

Surveyed By: John West
Date of Survey: 8/23/1980
Certificate Number: 676

District I
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State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

Form C-102
August 1, 2011

Permit 233835

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number	2. Pool Code	3. Pool Name
30-005-60782	97223	DIAMOND MOUND; UPPER PENN. (G)
4. Property Code	**5. Property Name**	**6. Well No.**
9576	TOLES FEDERAL	001
7. OGRID No.	**8. Operator Name**	**9. Elevation**
18917	READ & STEVENS INC	3518

10. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
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11. Bottom Hole Location If Different From Surface

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County

12. Dedicated Acres	13. Joint or Infill	14. Consolidation Code	15. Order No.
320.00			

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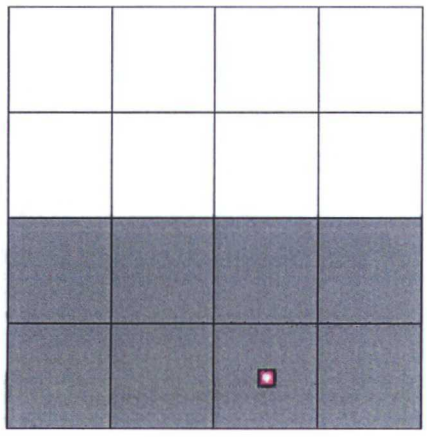


OPERATOR CERTIFICATION

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(s) 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.

E-Signed By:
Title: Pres
Date: 3-27-2017

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.

Surveyed By: John West
Date of Survey: 8/23/1980
Certificate Number: 676

Exhibit To NMOC Form C-107A – Application For Downhole Commingling

Read and Stevens, Inc.

Toles Federal #1

API # 30-005-60782
660' FSL & 1980' FEL
Section 34 T15S – R27E
Latitude 32.9669075 & Longitude 104.2210312
Chaves County, New Mexico

Explanation for Attachments under "Additional Data" on the C-107A:

A C-102 has been attached for each of the zones that it is proposed to produce on the C-107.

A production curve for the Morrow formation is included with the attached reserve report. The proposed zones in the Pennsylvanian and Strawn do not have a production curves since they have not been completed or produced as of this date. However, the decline curve does include projected future production from all the zones that are being proposed to commingle.

The attached reserve report prepared by Garry Ward includes reserve estimates for the proposed completion in the Pennsylvanian and the existing and proposed completion in the Morrow. Reserves were not allocated to the Strawn Formation since there is only one foot that is proposed to be completed in that particular formation.

No allocation formula is required since the Royalty owners are the same with the same percentage of interest in the existing formation and all the formations that are being proposed to commingle.

As stated above, the Royalty owners are the same, with the same percentage of interest in the existing producing formation and formation that are being proposed to commingle. Therefore a notification list should not be required.

The additional supporting documents that are being submitted with this application include a recent reserve study, inclusive of a decline curve, projected recoveries, and remaining reserves in place. The report breaks the reserves into proved and probable reserves categories. The report also contains a historical production plot, together with forecasted production.

Submitted By:

Matt Murphy
Agent & Consultant
Read and Stevens, Inc.
Date: November 14, 2016

NOT Successful

General

Company:	Read & Stevens	**Prospect:**	Diamond Mound Morrow
Well Name:	Toles Federal #1	**TD (MD/TVD):**	9000' TVD
County:	Chavez	**Elevation:**	3518' GL & KB
State:	New Mexico	**Latitude & longitude:**	32.9669075,-104.2210312 NAD83
API Number:	30-005-60782	**Section-Township-Range**	Sec 34 T15S-R27E
Directions:		**Surface Location:**	34-15S-27E 660' FSL & 1980' FEL
		Bottom Hole Location:	34-15S-27E 660' FSL & 1980' FEL

Formation	Depth Notes	Depth TVD	Casing Profile	Hole Size	Casing Specificaitons	Cementing
				17 1/2"	13" 3/8 48# H-40, S. T. & C	Halco Lite ement w/5# gulsonite per sx. & 1/4# flocele per sx. Followed w/200sx Class C w/2% CaCl2 &1/4# flocele per sx. Cement circulated
13 3/8" Casing @ 383'						
Rustler Anhydrite	550 sks	Circ to Surface		11"	8 5/8" 24#, J-55, S.T.&C	Cemented w/100 s. Halco Lite cement w/5# gulsonite &1/4# flocele per sx. Follwed w/200sx Class "H" cement w/2% CaCl2
8 5/8th" Casing @ 1730'						
	300 sks			7 7/8"	4 1/2" 11.6#	
	TOC @	5250' by WL				
Wolfcamp (estimate)		6525				
Proposed Penn Perf	PENN	7640-7649"		7 7/8"	4 1/2" 11.6#	Gas show on mudlog, sample shows indicate abundant fossils and cr
Proposed Strawn Perf	Strawn	8214'				
Proposed Atoka Perf	Atoka	8695.5-8699				Gas show on mudlog, sample descriptions imply colitic rock
Existing Morrow Perfs		8720-8732				24 Holes
		(w/2JSPF)				
				7 7/8"	4 1/2" 11.6#	
4 1/2" Casing @ 8988'						
1300 sacks	PBTD= 8943					

Comments

Objective: Repair casing leak and return to production, or perf proposed formations, if not succesfull plug and abandon

The well holds 320 acre Federal Lease

Cummulative production 4.612 BCFG, 10,595 BO, & 671 BW

Garry Ward

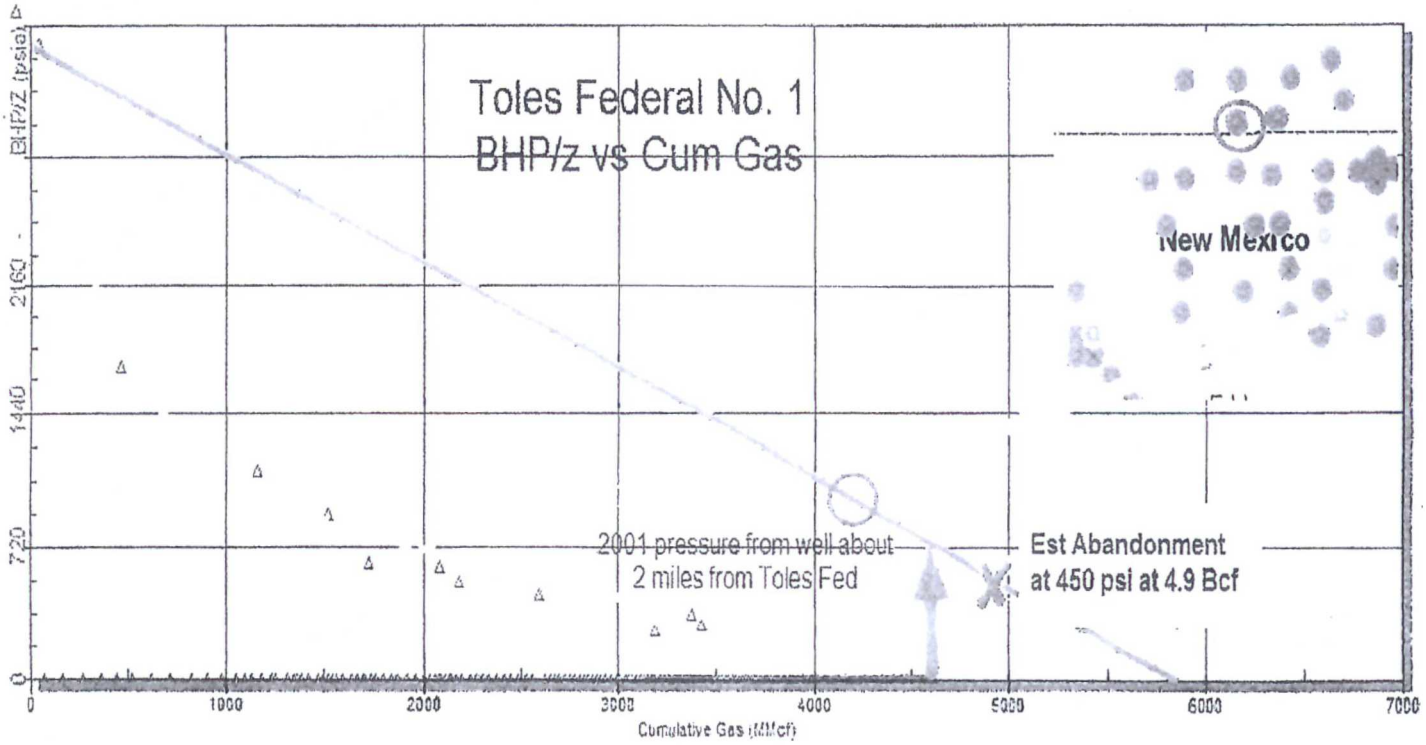
To: Garry Ward
Subject: Toles Federal #1 - Read and Stevens, Inc.

Reserve Conclusions

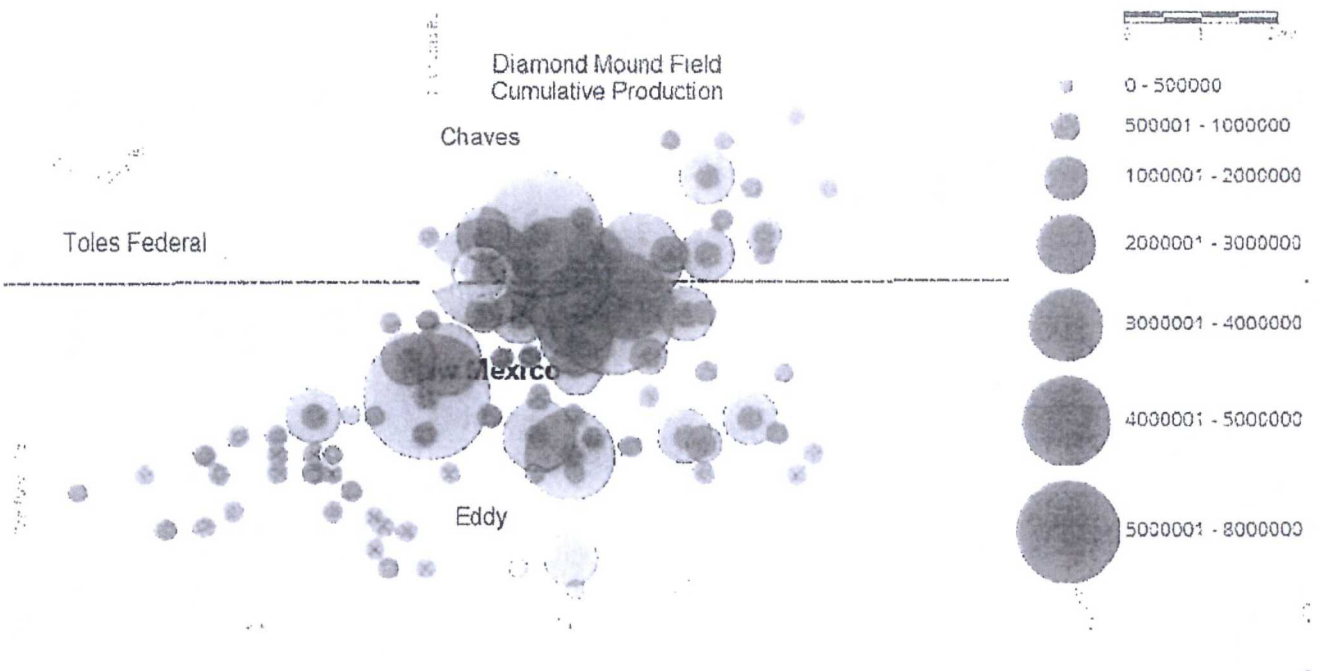
I have reviewed what I could in regard to the Toles Federal No.1. Based on my review I have assigned proved reserves of 180 MMcf to the Morrow and 175 MMcf probable reserves to the uphole Penn formation. Based on a workover cost of 161M$ and an initial rate of about 4000 Mcfpm this work should yield a rate of return of about +50% over a 2 year period. Gas price was initially set at $3.00 per MMbtu and escalated at 5% after one year. Operating expenses were set at $2000 per month and escalated at 5%

Morrow Formation

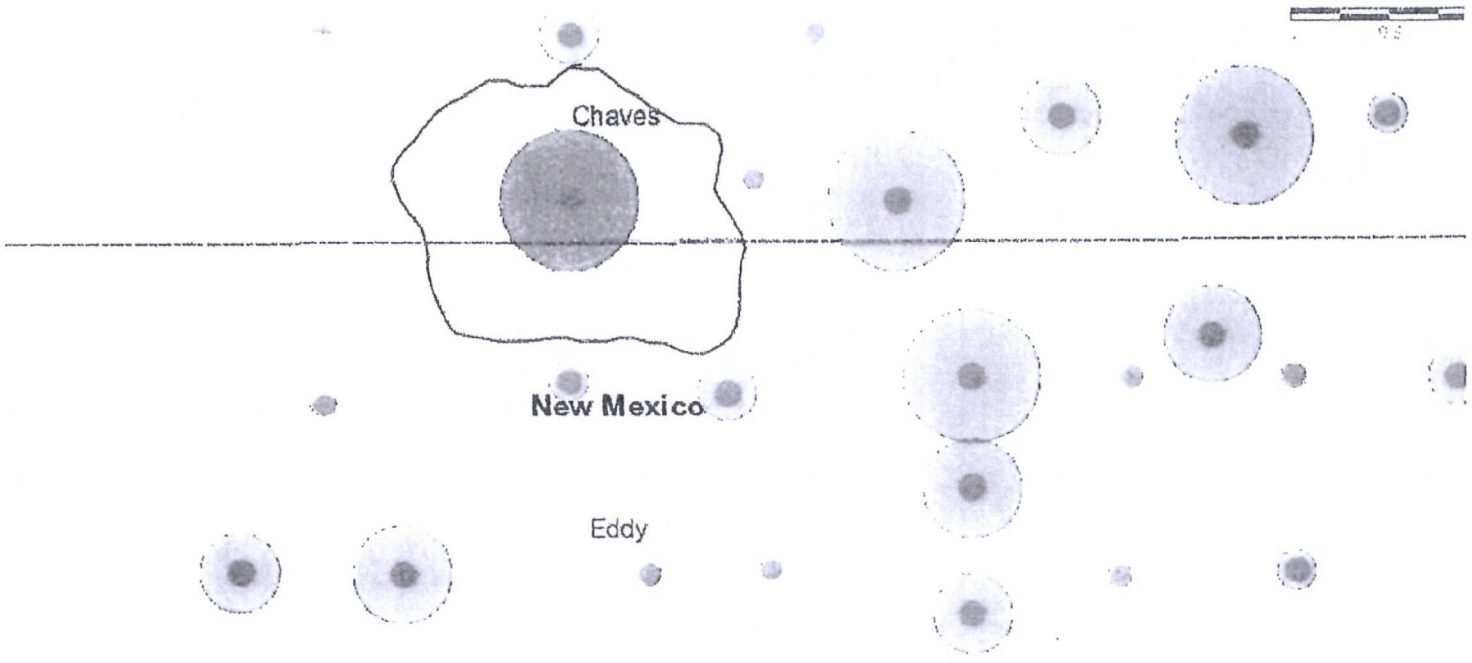
I did not find any information in regard to flowing well history. The only data that had any flowing data was the initial reported test of 23 MMcfpd with 1725 psi flowing pressure. Given that simple data and a reservoir pressure of 3250 psi, the permeability of this wellbore would be about 10 mD. That permeability appears to be high given the production history of the field. It also does not agree with the curved plot of the BHP/z plot below. Without additional flowing data it would be difficult to make a determination about the condition of the well in terms of skin. The cumulative production from the well has been about 4.7 Bcf. Based on an abandonment pressure of 450 psi it appears that proved reserves of about 200 MMcf are reasonable. Using a risk factor of 90% yields adjusted proved reserves of 180 MMcf. Acidizing the well should improve the flow rate, but fluid buildup in the wellbore will continue to be a problem due to liquid loading



Map of cumulative production (Mcf) from the Diamond Mound Field as of October 2016. Clearly the area around the Toles Federal is a highly fractured area with communicating fractures in multiple directions

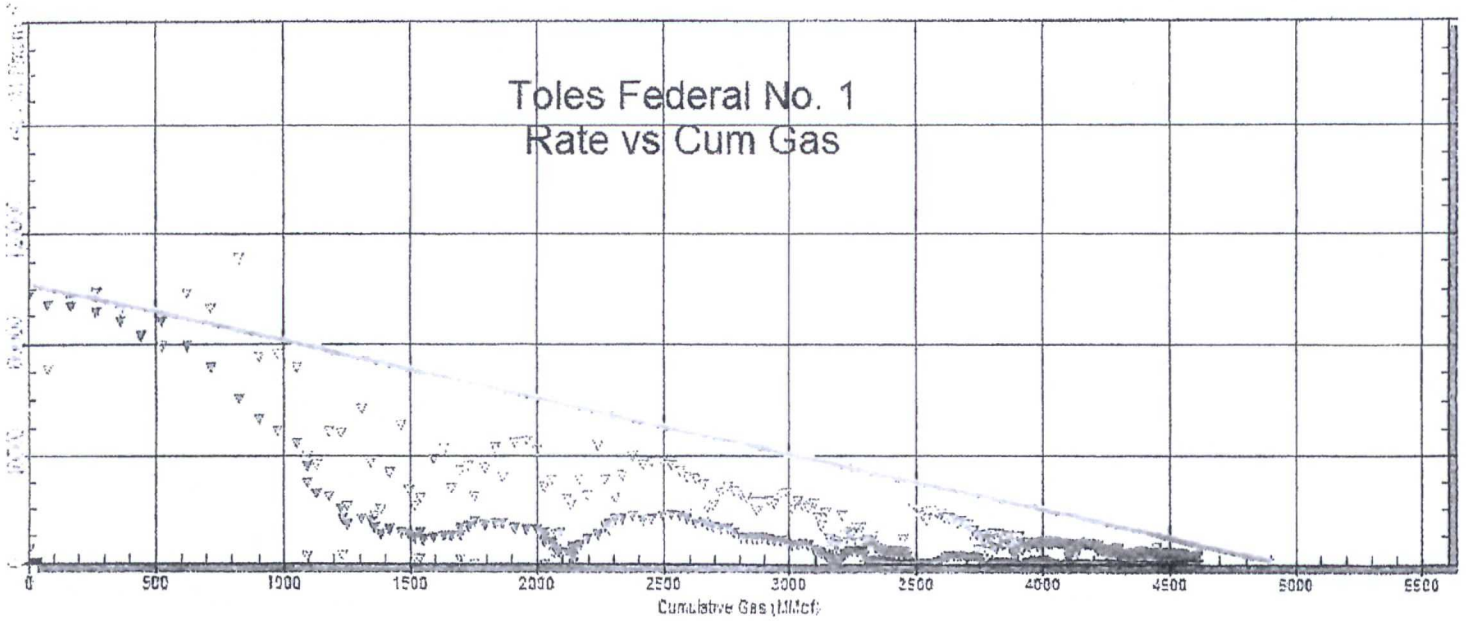


This map shows the approximate drainage area of the Toles Federal No. 1. Shown is an area of 455 acres, but could be even larger with no competitive wells to the west and limited production north and south.



Length: 17.550 Feet, Area: 444.726 Acres Features Selected: 392 Active Layer - Land Grid

The rate vs cum production plot below show that for a good amount of time this well has been underperforming its potential. This would give further evidence of wellbore damage. There is some room for improved production, but not a lot.



Atoka Formation (8695-8710)

Based on the data from the Morrow formation and log shown above, it is probably true that whatever reserves there were in the upper Atoka are already in communication with the lower Morrow formation.

Pennsylvanian Formation (7645-7655)

Based on a review of 282 completions in the Penn formation there were 86 wells with cumulative production less than 50 MMcf this represents 35% of all Penn completions. In the interval from 50-400 MMcf there were 70 completions for 24%. This leaves 44% of wells completed in the Penn greater than 400 MMcf. Based on these rough numbers it is estimated that the volumetric recovery from this interval could be as much as 350 MMcf of probable reserves. Assuming a 75% recovery rate, this is a gas in place number of 470 MMcf. Volumetrically 10 ft, 160 acres, 40% water saturation and 9% porosity would yield 500 MMcf in place. Because the zone has not been tested a risk factor of 50% as used to determine the adjusted probable reserve of 175 MMcf.