

7/15/03 DATE IN	7/15/03 SUSPENSE	DHC ENGINEER	7/15/03 LOGGED IN	DHC TYPE	PDIC0319647780 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.

PEGGY COLE \_\_\_\_\_ JUL 15 2003  
Print or Type Name Signature Title Oil Conservation Division  
Regulatory Supr. 7-14-03  
peole@br-inc.com  
e-mail Address

District I  
1625 N. French Drive, Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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

Form C-107A  
Revised May 15, 2000

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

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

APPLICATION FOR DOWNHOLE COMMINGLING

BURLINGTON RESOURCES OIL & GAS COMPANY PO BOX 4289, FARMINGTON, NM 87499

Operator Address  
Jicarilla 150 #7M O-11-26N-5W Rio Arriba  
Lease Well No. Unit Letter-Section-Township-Range County  
OGRID No. 14538 Property Code 16344 API No. 30-039-22058 Lease Type: X Federal State Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	OTERO CHACRA	BLANCO MESAVERDE	BASIN DAKOTA
Pool Code	82329	72319	71599
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	WILL BE SUPPLIED UPON COMPLETION	5809'-6171'	8034'-8086'
Method of Production (Flowing or Artificial Lift)	NEW ZONE	ARTIFICIAL LIFT PLUNGER	ARTIFICIAL LIFT PLUNGER
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)	Original 449 psi From Jicarilla 150 #12 offset (see attachment)	Original 912 psi Current 304 psi	Original 2625 psi Current 950 psi
Oil Gravity or Gas BTU (Degree API or Gas BTU)	BTU 1240 From Jicarilla 150 #12 offset	BTU 1221	BTU 1221
Producing, Shut-In or New Zone	New Zone	Producing	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: N/A  Rates: See Attachment	Date: 5/31/03  Rates: 109 Mcfd	Date: 5/31/03  Rates: 79 Mcfd
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	WILL BE SUPPLIED UPON COMPLETION	WILL BE SUPPLIED UPON COMPLETION	WILL BE SUPPLIED UPON COMPLETION

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes X No  
Are all produced fluids from all commingled zones compatible with each other? Yes X No  
Will commingling decrease the value of production? Yes No X  
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 X No

NMOCD Reference Case No. applicable to this well: DHC-1983

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.
- 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 J. Tom Loveland TITLE Senior Reservoir Engr. DATE 7/14/03  
nxo  
TYPE OR PRINT NAME L. Tom Loveland TELEPHONE NO. ( 505 ) 326-9700

## WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-100  
Supersedes C-1  
Effective 1-1-79

All distances must be from the outer boundaries of the Section.

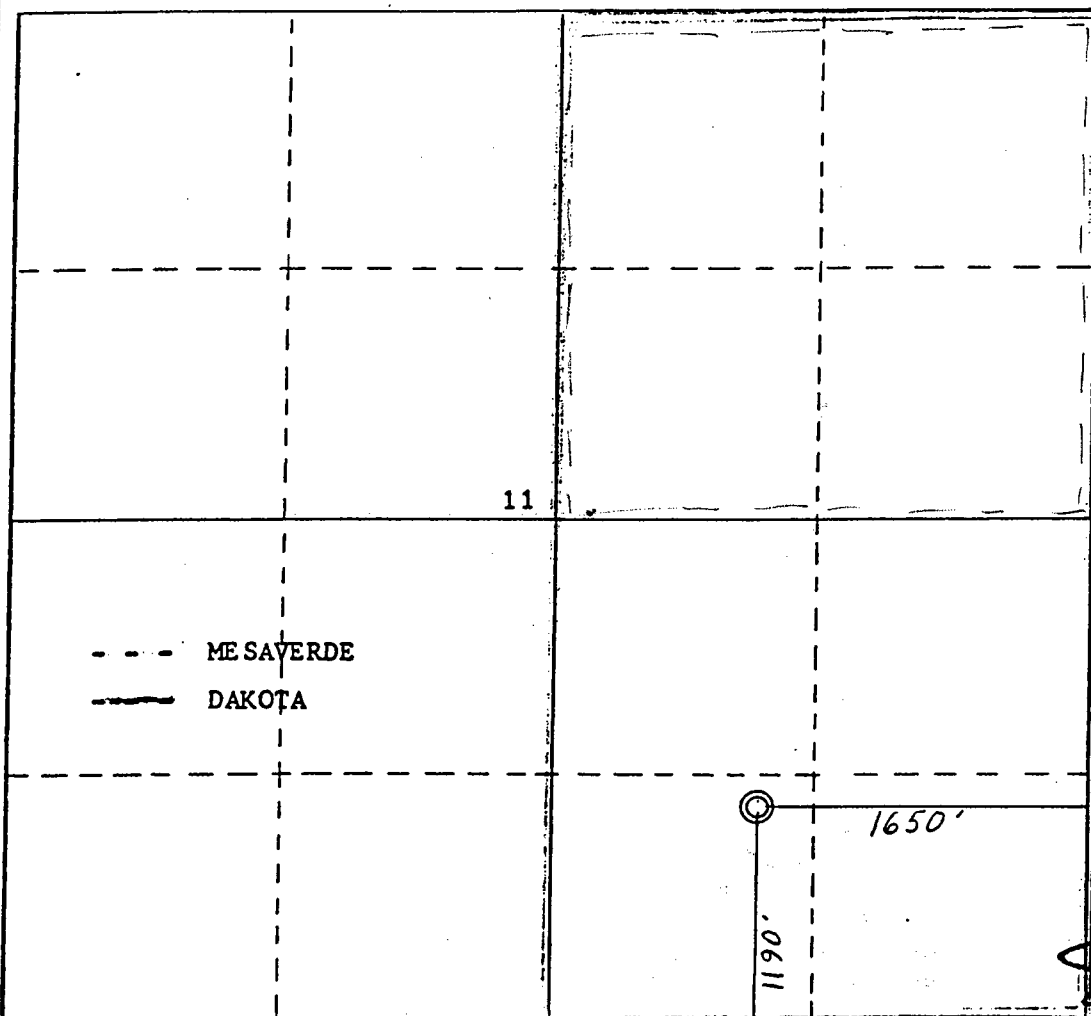
Color <b>SUPRON ENERGY CORPORATION</b>			Lease <b>JICARILLA</b>		Well No. <b>7-4 M</b>
Unit Letter <b>0</b>	Section <b>11</b>	Township <b>26 NORTH</b>	Range <b>5 WEST</b>	County <b>RIO ARriba</b>	
Actual Footage Location of Well: <b>1190</b> feet from the <b>SOUTH</b> line and <b>1650</b> feet from the <b>EAST</b> line					
Ground Level Elev. <b>7206</b>	Producing Formation <b>ME SAVERDE</b> <b>CHACRA DAKOTA</b>		Pool <b>BLANCO</b> <b>BASIN Otero</b>	Dedicated Acreage: <b>E 1/2 320/160 Acr</b>	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



## CERTIFICATION

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

*Kenneth E. Roddy*  
Name

**Kenneth E. Roddy**

Position

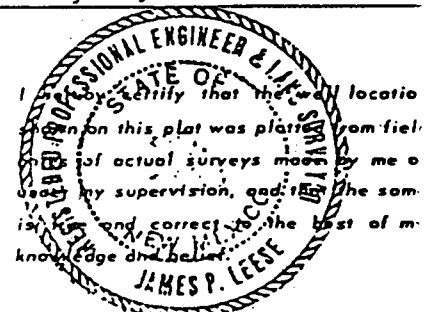
**Production Superintendent**

Company

**SUPRON ENERGY CORPORATION**

Date

**May 21, 1979**



Date Surveyed

**6 April 1979**

Registered Professional Engineer and/or Land Surveyor

*James P. Leese*

Certificate No.

**1463**

**Jicarilla 150 #7M**  
**Bottom Hole Pressures**  
**Flowing and Static BHP**  
**Cullender and Smith Method**  
Version 1.0 1/14/98

<b>Chacra</b>		<b>Mesaverde</b>	
<u><b>CH-Current</b></u>		<u><b>MV-Current</b></u>	
GAS GRAVITY	0	GAS GRAVITY	0.709
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0	%N2	0.00
%CO2	0	%CO2	0.01006
%H2S	0	%H2S	0
DIAMETER (IN)	0	DIAMETER (IN)	5.5
DEPTH (FT)	0	DEPTH (FT)	5990
SURFACE TEMPERATURE (DEG F)	0	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	0	BOTTOMHOLE TEMPERATURE (DEG F)	144.4
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	0	SURFACE PRESSURE (PSIA)	264
BOTTOMHOLE PRESSURE (PSIA)	#DIV/0!	BOTTOMHOLE PRESSURE (PSIA)	306.4
<u><b>CH-Original</b></u>		<u><b>MV-Original</b></u>	
GAS GRAVITY	0.719	GAS GRAVITY	0.6832
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.00573	%N2	0.26
%CO2	0.00865	%CO2	0.911
%H2S	0	%H2S	0
DIAMETER (IN)	7	DIAMETER (IN)	5.5
DEPTH (FT)	1959	DEPTH (FT)	5990
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	92.7	BOTTOMHOLE TEMPERATURE (DEG F)	144.4
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	425	SURFACE PRESSURE (PSIA)	780
BOTTOMHOLE PRESSURE (PSIA)	448.5	BOTTOMHOLE PRESSURE (PSIA)	911.8

**Jicarilla 150 #7M**  
**Bottom Hole Pressures**  
**Flowing and Static BHP**  
**Cullender and Smith Method**  
Version 1.0 1/14/98

<b>Dakota</b>			
<u><b>DK-Current</b></u>		<u><b>DK-Current</b></u>	
GAS GRAVITY	0.709	GAS GRAVITY	0
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.00445	%N2	0.00
%CO2	0.01006	%CO2	0
%H2S	0	%H2S	0
DIAMETER (IN)	2.0625	DIAMETER (IN)	0
DEPTH (FT)	8060	DEPTH (FT)	0
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	0
BOTTOMHOLE TEMPERATURE (DEG F)	173.6	BOTTOMHOLE TEMPERATURE (DEG F)	0
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	767	SURFACE PRESSURE (PSIA)	0
BOTTOMHOLE PRESSURE (PSIA)	949.7	BOTTOMHOLE PRESSURE (PSIA)	#DIV/0!
<u><b>DK-Original</b></u>		<u><b>DK-Original</b></u>	
GAS GRAVITY	0.6689	GAS GRAVITY	0
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.194	%N2	0.00
%CO2	0.675	%CO2	0
%H2S	0	%H2S	0
DIAMETER (IN)	2.0625	DIAMETER (IN)	0
DEPTH (FT)	8060	DEPTH (FT)	0
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	0
BOTTOMHOLE TEMPERATURE (DEG F)	173.6	BOTTOMHOLE TEMPERATURE (DEG F)	0
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	2101	SURFACE PRESSURE (PSIA)	0
BOTTOMHOLE PRESSURE (PSIA)	2624.7	BOTTOMHOLE PRESSURE (PSIA)	#DIV/0!

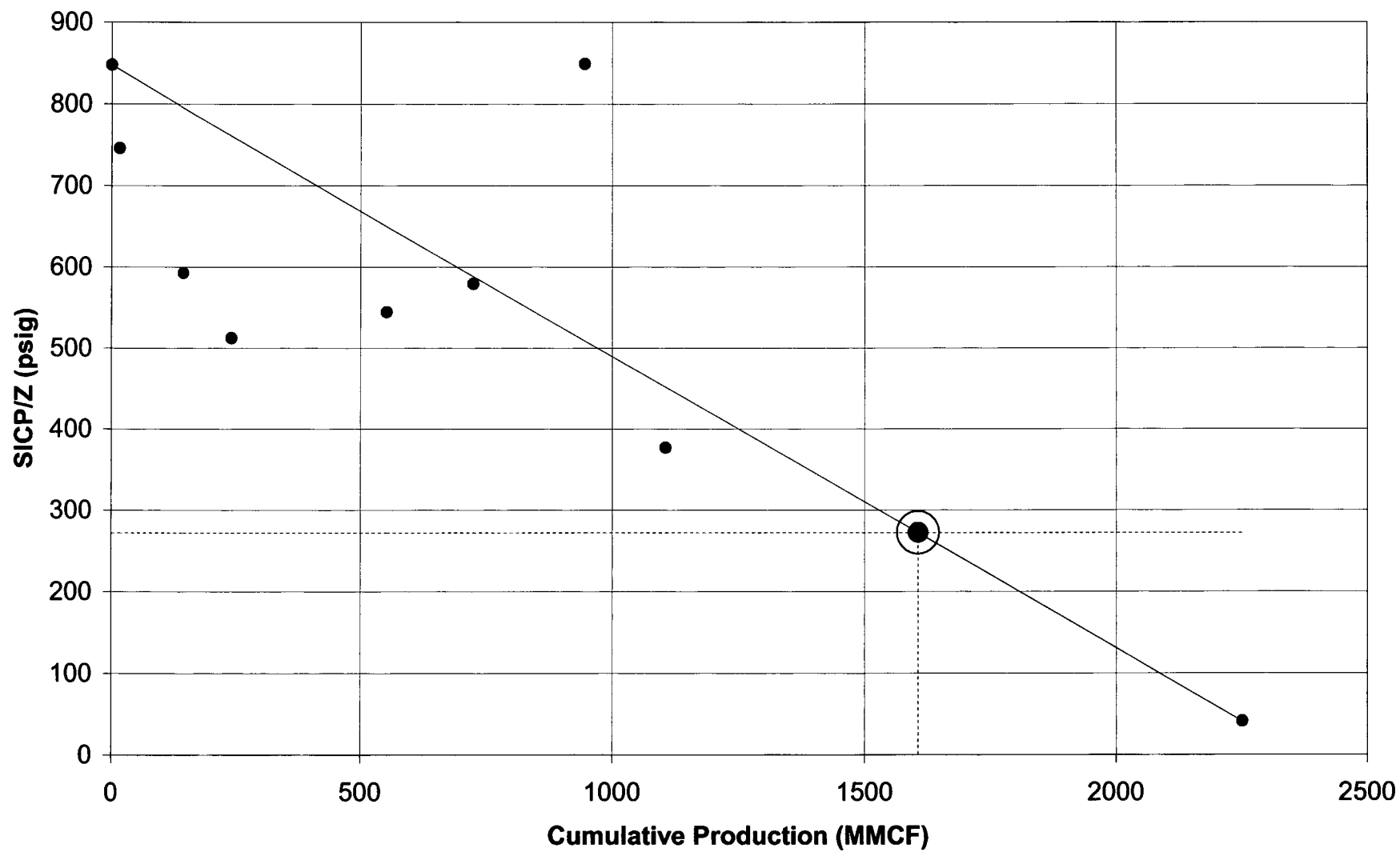
## Jicarilla 150 #7M - SICP/Z Data

Zone: Mesaverde							
Date	SICP (psig)	Chromatograph Used	Z-Factor	SICP/Z (psig)	Cum Qg (MMCF)	Slope	Y Intercept
7/14/1980	780	10/1/2002	0.9203	848	0	N/A	848
11/17/1980	693	10/1/2002	0.9294	746	15.858	-6.426243	848
9/25/1981	558	10/1/2002	0.9422	592	146.058	-1.748064	848
5/2/1982	486	10/1/2002	0.9492	512	242.301	-1.384805	848
4/23/1986	515	10/1/2002	0.9464	544	552.612	-0.548997	848
11/20/1989	546	10/1/2002	0.9434	579	723.789	-0.371368	848
4/29/1993	782	10/1/2002	0.9213	849	945.31	0.001323	848
6/27/1995	362	10/1/2002	0.9617	376	1104.98	-0.426372	848
???	41	N/A	1	41	2250.965	-0.358313	848
5/31/2003	???	10/1/2002	???	272	1605.79	↓ -0.358313	↓ 848
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Z-Factor = 0.97</b>  <b>SICP (psig) = 264</b> </div>							

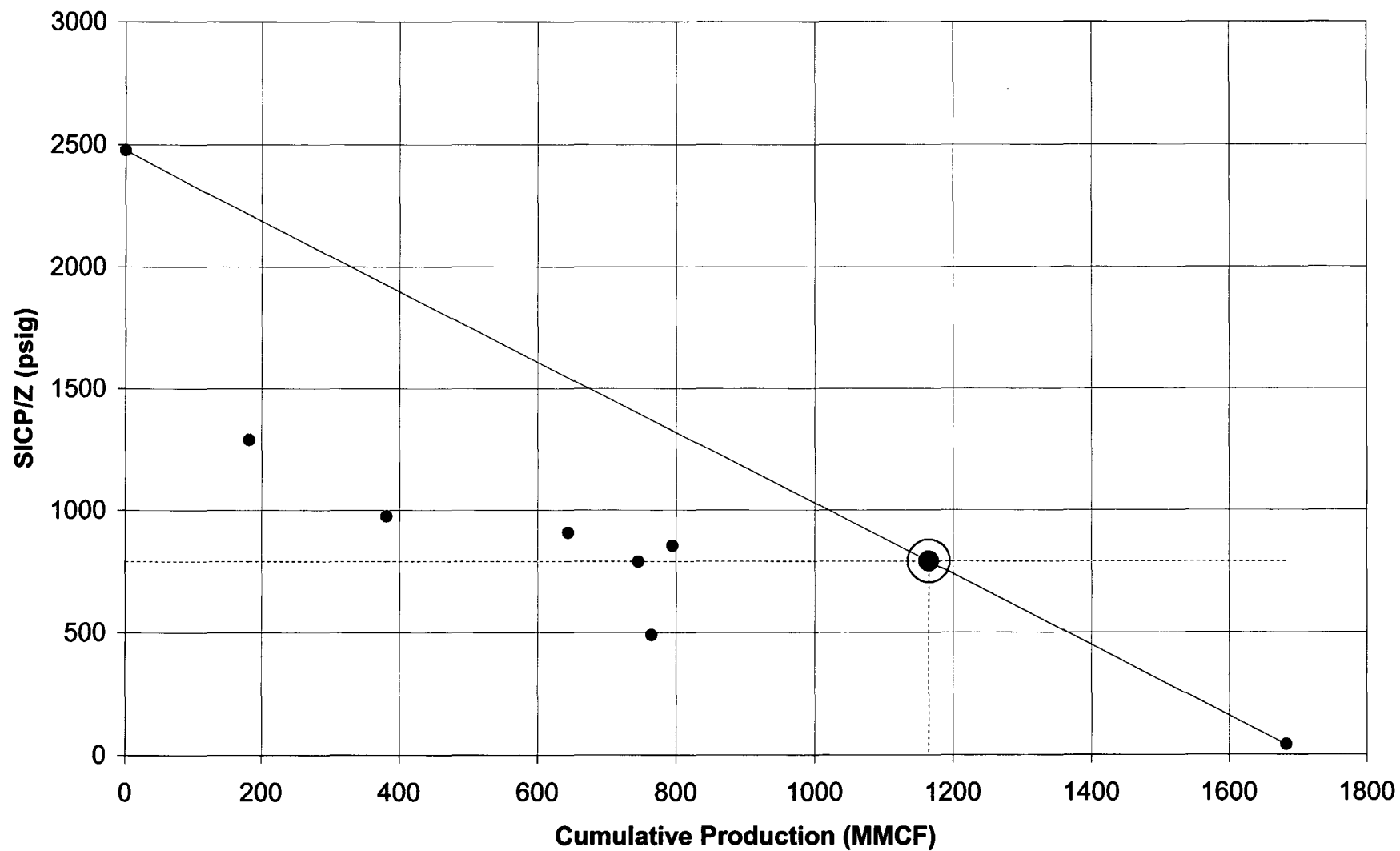
Zone: Dakota							
Date	SICP (psig)	Chromatograph Used	Z-Factor	SICP/Z (psig)	Cum Qg (MMCF)	Slope	Y Intercept
7/14/1980	2101	10/1/2002	0.8484	2476	0	N/A	2476
9/25/1981	1148	10/1/2002	0.8914	1288	182.315	-6.51929	2476
7/25/1983	889	10/1/2002	0.912	975	381.477	-3.936399	2476
1/13/1988	832	10/1/2002	0.9169	907	644.356	-2.435022	2476
10/3/1990	731	10/2/2002	0.9259	790	745.363	-2.263225	2476
5/29/1991	466	10/3/2002	0.9512	490	764.227	-2.599383	2476
4/29/1992	786	10/4/2002	0.9209	854	794.393	-2.04296	2476
???	41	N/A	1	41	1682.164	-1.447793	2476
5/31/2003	???	10/1/2002	???	790	1164.64	↓ -1.447793	↓ 2476
<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Z-Factor = 0.97</b>  <b>SICP (psig) = 767</b> </div>							

NOTE: THESE ARE ESTIMATES OF THE CURRENT RESERVOIR PRESSURE IN EACH ZONE. IT IS REALIZED THAT THE NEAR-WELLBORE PRESSURES FOR EACH ZONE SHOULD BE SIMILAR, DUE TO THEIR COMMINGLED STATUS.

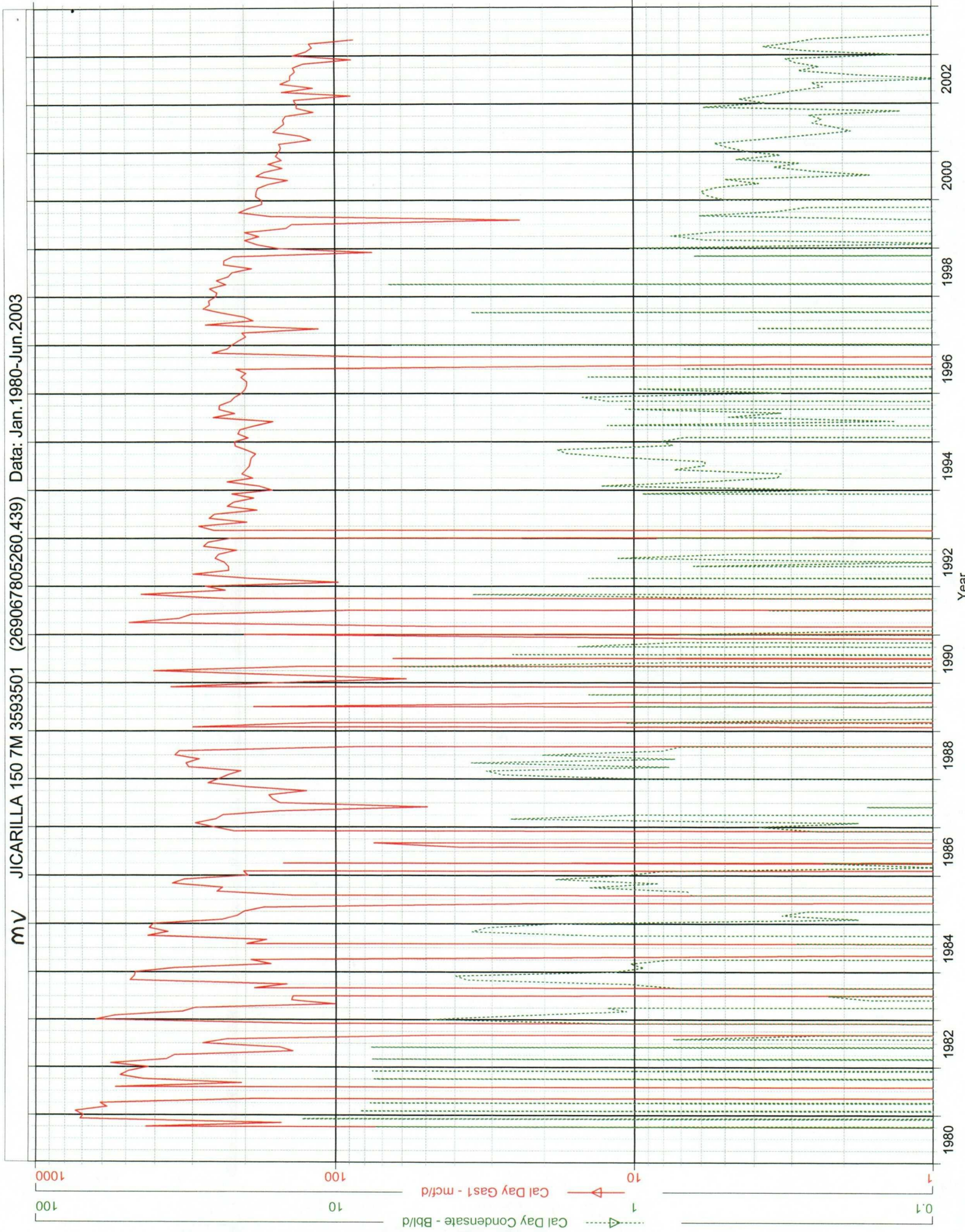
# Jicarilla 150 #7M (MV)



# Jicarilla 150 #7M (DK)

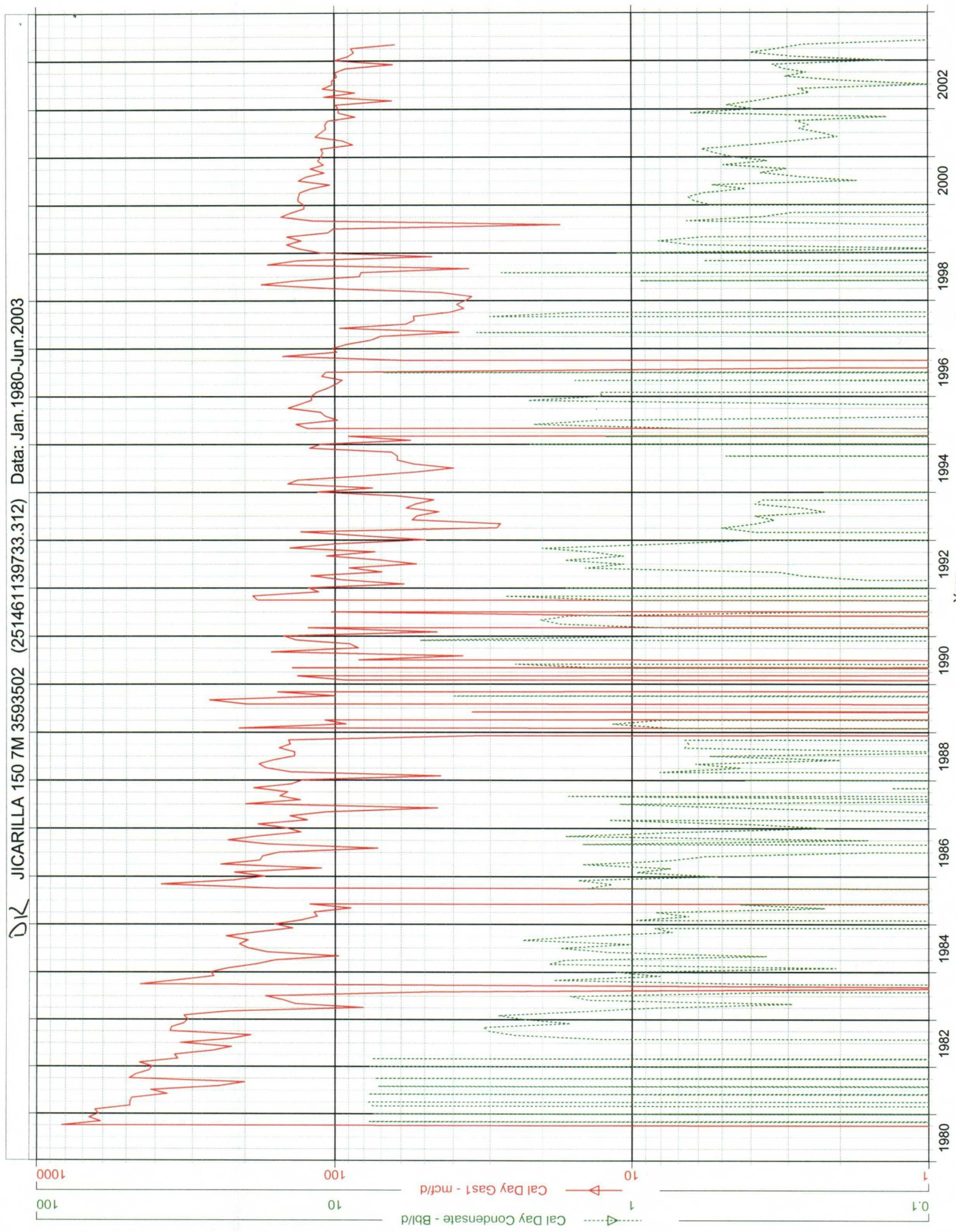








DK JICARILLA 150 7M 3593502 (251461139733.312) Data: Jan. 1980-Jun. 2003





# BURLINGTON RESOURCES

Lewis Implementation Team

## Memorandum

**TO:** New Mexico Oil Conservation Division  
**FROM:** Lewis Implementation Team, Burlington Resources  
**DATE:** December 2, 2002  
**RE:** 2003 Chacra Recompletion Program Expected Production

Chacra-only production from 73 wells completed after 1970 was normalized and forecasted to result in the production model presented in Table 1. A graphical representation of this normalized production forecast is shown in the attached Figure 1. These wells are located in or near the Chacra Fairway in T-27-N, R-08-W; T-27-N, R-09-W; T-28-N, R-08-W; T-28-N, R-09-W; T-28-N, R-10-W; T-28-N, R-11-W; T-29-N, R-09-W; T-29-N, R-10-W; and T-29-N, R-11-W. Actual results from the individual payadds will certainly vary, but this production model represents the average results that should be achieved. Further delineation in the area will be made in 2003.

**Table 1: 2003 Chacra production model.**

Decline Type	Hyp to Exp
Initial Incremental Rate (MCF/D)	260
Initial Decline (%/yr, effective)	62
Final Decline (%/yr, effective)	1.6
Final Incremental Rate (MCF/D)	15
Hyperbolic Exponent, n	2.0
EUR (MMCF)	496

**Figure 1. Graphical representation of the 2003 Chacra production model.**



**Jicarilla 150 #8**  
**Bottom Hole Pressures**  
**Flowing and Static BHP**  
**Cullender and Smith Method**  
Version 1.0 1/14/98

<b>Chacra</b>		<b>Mesaverde</b>	
<u><b>CH-Current</b></u>		<u><b>MV-Current</b></u>	
GAS GRAVITY	0	GAS GRAVITY	0.703
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0	%N2	0.00
%CO2	0	%CO2	0.01115
%H2S	0	%H2S	0
DIAMETER (IN)	0	DIAMETER (IN)	5.5
DEPTH (FT)	0	DEPTH (FT)	5104
SURFACE TEMPERATURE (DEG F)	0	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	0	BOTTOMHOLE TEMPERATURE (DEG F)	146.3
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	0	SURFACE PRESSURE (PSIA)	326
BOTTOMHOLE PRESSURE (PSIA)	#DIV/0!	BOTTOMHOLE PRESSURE (PSIA)	370.1
<u><b>CH-Original</b></u>		<u><b>MV-Original</b></u>	
GAS GRAVITY	0.719	GAS GRAVITY	0.6619
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.00573	%N2	0.31
%CO2	0.00865	%CO2	0.98
%H2S	0	%H2S	0
DIAMETER (IN)	7	DIAMETER (IN)	5.5
DEPTH (FT)	1959	DEPTH (FT)	5104
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	92.7	BOTTOMHOLE TEMPERATURE (DEG F)	146.3
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	425	SURFACE PRESSURE (PSIA)	1023
BOTTOMHOLE PRESSURE (PSIA)	448.5	BOTTOMHOLE PRESSURE (PSIA)	1167.5