



STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

Date: 5/14/91

Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

RE: Proposed MC _____
Proposed NSL _____
Proposed WFX _____
Proposed NSP _____

Proposed DHC X _____
Proposed SWD _____
Proposed PMX _____
Proposed DD _____

Gentlemen:

I have examined the application received on May 6, 1991
for the San Juan Union Exp Co Permilla K #14
OPERATOR LEASE & WELL NO.

O-11-25N 5W and my recommendations are as follows:
UL-S-T-R

CC, please

Yours truly,

S. J. - 8



Southern Union Exploration Company
Suite 1900
Renaissance Tower
1201 Elm Street
Dallas, Texas 75270
214/ 748-8511

David W. Stevens, P.E.
Vice President - Operations

May 1, 1991

State of New Mexico
Oil Conversation Division
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Attn: Division Director

RECEIVED
MAY 06 1991
OIL CON. DIV.
DIST. 3

RE: Jicarilla "K" #14
Rio Arriba County, New Mexico

Gentlemen:

Enclosed please find a completed form C-103 along with additional information supporting Southern Union Exploration Company's (SX's) request to commingle the Pictured Cliff and Chacra formations found in the above referenced well. SX received verbal permission from Mr. Frank Chavez of your Aztec office as well as Mr. Steve Mason of the BLM concerning our intention to set up the well for commingling. We did understand that we need to file the necessary data and receive the appropriate approvals prior to initiating production from the commingled zones. As we have indicated, the Pictured Cliffs formation would contribute 80.7% of the commingled production and the Chacra formation would contribute 19.3%. This commingling will enable SX to produce both zones without as much capital outlay as well as reduce normal operating expenses by virtue of only having one string of tubing in the well. SX believes that the value of the commingled production will be greater than the sum of the value of the individual streams and that commingling of these two zones will not harm their respective reservoirs.

SX respectfully requests that you approve the commingling of these two zones and allow us to initiate production as soon as possible. If you have any questions, feel free to contact me.

Sincerely,

DWS:rg
Enclosures

cc: Oil Conservation Division - Aztec, New Mexico
Bureau of Land Management - Farmington, New Mexico
Amoco Production - Offset Operator
MDB
PF
CF

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ well gas ☒ well other ☐

2. NAME OF OPERATOR
Southern Union Exploration Company

3. ADDRESS OF OPERATOR
1201 Elm Street, #1900, Dallas, TX 75270

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 975' FSL & 1640' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
CHANGE ZONES ☐
ABANDON* ☐

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(other) Comingle Chacra & Pictured Cliffs (Temporary Dakota)

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

- 1) POH with all equipment.
- 2) RIH and set plug in Model "D" packer to isolate Dakota.
- 3) RIH with tubing and set to produce Pictured Cliffs and Chacra.

Subsurface Safety Valve: Manu. and Type _____

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

SIGNED [Signature] TITLE V.P. - Operations

DATE May 1 1991

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____
CONDITIONS OF APPROVAL, IF ANY:

DATE _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions on re-
verse side)

Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

Contract #145

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Jicarilla Apache

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Jicarilla "K"

9. WELL NO.

14

10. FIELD NO. PICTURED CLIFFS

Basin Dakota - Chraca

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec11,T25N,R5W NMPM

12. COUNTY OR PARISH

13. STATE

Rio Arriba

1. OIL ☐ GAS ☐ OTHER ☒
WELL WELL OTHER

2. NAME OF OPERATOR

Southern Union Exploration Company

3. ADDRESS OF OPERATOR

324 Hwy US64 NBU3001 Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.
See also space 17 below)

At surface

975 Feet from the South line and 1640 Feet from the east line.

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

6798 FT R.K.B.

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT OFF

PULL OR ALTER CASING

FRACTURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANE

(Other)

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SUBSEQUENT REPORT OF:

WATER SHUT OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

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(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

We propose to temporary abandon the Dakota zone by setting a plug in the Mod "D" production packer that is set at 7162'.

Verbal permission has been given by NMOCD, Aztec Office (Frank Chavez) and verbal permission has been given by BLM, Farmington Office (Steve Mason).

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

SIGNED

Martin D. Boggs

TITLE Drilling & Prod. Supt.

DATE April 26, 1991

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

JICARILLA "K" #14

Pictured Cliffs

Date Completed:	10/13/71
Perforations:	3064'-3114'
Zone Temperature:	117 F
Gas Gravity:	0.0715
SITP: (7/1/90)	356 psi (108 Day SI)
Calculated BHP:	358 psi
1990 Production:	9820 MCF
Latest Test Rate:	67 MCFD

Based on the latest test, the Pictured Cliffs would contribute 80.7% of the commingled production.

Submit 2 copies to Appropriate District Office.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico

Energy, Minerals and Natural Resources Department

SX ENG.

Form C-116
Revised 1/1/89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

APR 30 1991

GAS - OIL RATIO TEST

Operator		Southern Union Exploration		Pool		South Blanco Pictured Cliff		County		Rio Arriba						
Address		324 Hwy US #64, NBU 3001, Farmington, NM 87401		TYPE OF TEST - (X)		SCHEDULED		Completion		Special						
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	STATUS	PLATE CHANGES SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT/BBL.		
		U	S	T							R	WATER BBLs.	GRAV. OIL		OIL BBLs.	GAS M.C.F.
Jicarilla K	14	0	11	25	05	01-25-91	†	.500	193	---	24	0	NA	0	67	NA

Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

(See Rule 301, Rule 1116 & appropriate pool rules.)

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

Signature

Martin D. Boggs

Printed name and title

April 26, 1991

Date

(505) 327-4481

Telephone No.

JICARILLA K14 PC

STATIC BOTTOM-HOLE PRESSURE DETERMINATION

Input Data:

Surface Temperature	60.0	deg.F
Bottom-Hole Temperature	120.0	deg.F
Shut-In Well Head Pressure	356.0	psi
Well Depth	3114.0	ft.
Gas Gravity	0.0715	

Critical Temp = 188.737 degR
Critical Pres = 690.426 psi

$Z_{ws} = 1.8225$ (reservoir conditions)
 $Z_{ms} = 1.0011$ (well midpoint conditions)

Formation Volume Factor = 11.99 SCF/cu.ft.

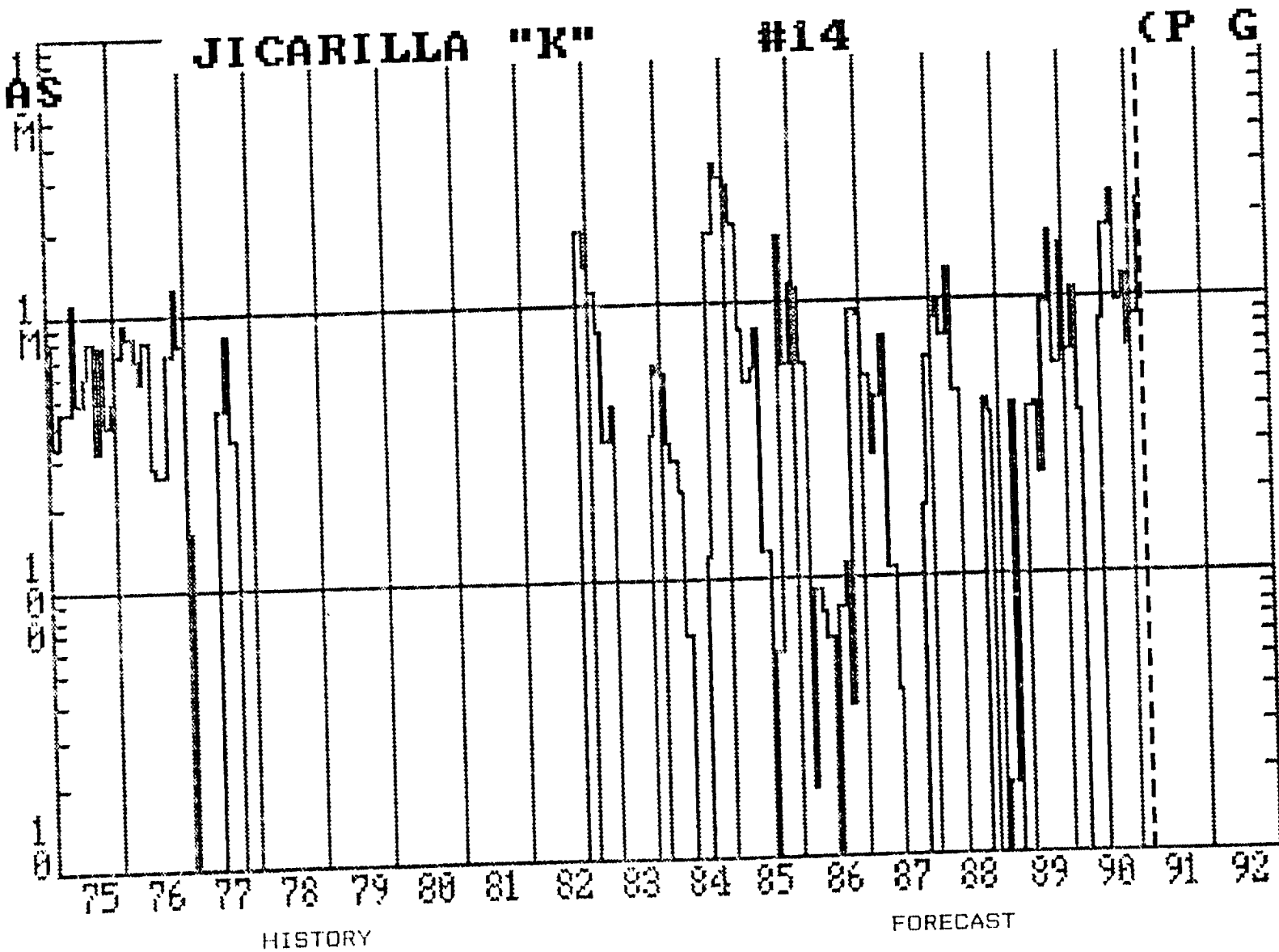
STATIC BOTTOM-HOLE PRESSURE = 358.37 psi

GCONM METER NO. 7159-05
SX NUMBER 1241121
SITP 0
SICP 356
SHUT-IN March 15, 1990
TURNED ON July 1, 1990
DAYS OFF 108

Property Code: 1241121

Location: RIO ARRIBA COUNTY, NM
Field: S BLANCO
Formation: PICTURED CLIFFS

PRODUCTION RATE HISTORY/ FORECAST



1st Production Date. Jan 1975
Last Production Date Apr 19 91
Completion Date.....
Cum. since Date.....
Cum..... 145.378 mmcf
Upper Perf.....
Lower Perf.....
Total Depth.....

Projected Decline... Exponential
Initial Rate..... 1.000 mmcf
Ending Rate..... 1.000 mmcf
Projected Reserves.. mmcf
Decline Rate..... 3.823 %
Projected Life..... 0 yrs 0 mths
Hyperbolic Constant.
First Date of Proj.. Mar 1991
Last Date of Proj... Jan 1991

Ultimate recovery (cum + projected): 145.378 mmcf

Operator (#)		Lease name		Well #	
		JICARILLA K #14	(PC)		
Ident. #	State	Dist	County	Location	Use/tax /unit #
1241121	NM(NM)			RIO ARRIBA	
API #	Field (#)		Reservoir		
00-000-00000	S BLANCO		PI		
Total Depth	Perforations Upper Lower		Temp Gradient	N-Factor	GOR
0	0	0	0.000	0.000	0
Comp Date	Production Dates First Last		Status Date	Status	
0	0	0	0		
Cumulative gas MCF Since		Gas Gravity		Gas Gatherer	
145378	FP Date	0.00			
Cumulative liquid BBL Since		Liquid Gravity		Liquid Gatherer	
0	FP Date	0.00			

Dwight's Energydata, Inc. DLOOK 4.20 Record # 3 Run date: 04/26/91
 Production data from file: JICK14.DMP Retrieval code: ,1241121
 Lease: JICARILLA K #14 (PC) Well #:

Month	Oil bbls	Cum Oil bbls	Gas mcf	Cum Gas mcf	Water bbls	No.of Wells
Total 1975	0	0	6962	77689	0	1
Total 1976	0	0	8023	85712	0	1
Total 1977	0	0	1767	87479	0	1
Total 1978	0	0	0	87479	0	1
Total 1979	0	0	0	87479	0	1
Total 1980	0	0	0	87479	0	1
Total 1981	0	0	0	87479	0	1
Total 1982	0	0	3227	90706	0	1
Total 1983	0	0	3580	94286	0	1
Total 1984	0	0	9207	103493	0	1
Total 1985	0	0	10787	114280	0	1
Total 1986	0	0	3969	118249	0	1
Total 1987	0	0	2965	121214	0	1
January	0	0	840	122054	0	1
February	0	0	990	123044	0	1
March	0	0	747	123791	0	1
April	0	0	1270	125061	0	1
May	0	0	455	125516	0	1
June	0	0	0	125516	0	1
July	0	0	0	125516	0	1
August	0	0	0	125516	0	1
September	0	0	0	125516	0	1
October	0	0	436	125952	0	1
November	0	0	383	126335	0	1
December	0	0	0	126335	0	1
Total 1988	0	0	5121	126335	0	1
January	0	0	0	126335	0	1
February	0	0	18	126353	0	1
March	0	0	413	126766	0	1
April	0	0	0	126766	0	1
May	0	0	0	126766	0	1
June	0	0	404	127170	0	1
July	0	0	408	127578	0	1
August	0	0	231	127809	0	1
September	0	0	943	128752	0	1

Dwight's Energydata, Inc. DLOOK 4.20 Record # 3 Run date: 04/26/91
 Production data from file: JICK14.DMP Retrieval code: ,,1241121
 Lease: JICARILLA K #14 (PC) Well #:

Month	Oil bbls	Cum Oil bbls	Gas mcf	Cum Gas mcf	Water bbls	No. of Wells
October	0	0	1693	130445	0	1
November	0	0	573	131018	0	1
December	0	0	1512	132530	0	1
Total 1989	0	0	6195	132530	0	1
January	0	0	641	133171	0	1
February	0	0	1070	134241	0	1
March	0	0	389	134630	0	1
April	0	0	0	134630	0	1
May	0	0	0	134630	0	1
June	0	0	0	134630	0	1
July	0	0	817	135447	0	1
August	0	0	1758	137205	0	1
September	0	0	2367	139572	0	1
October	0	0	941	140513	0	1
November	0	0	1166	141679	0	1
December	0	0	671	142350	0	1
Total 1990	0	0	9820	142350	0	1
January	0	0	843	143193	0	1
February	0	0	2185	145378	0	1
March	0	0	0	145378	0	1
April	0	0	0	145378	0	1
May	0	0	0	145378	0	1
June	0	0	0	145378	0	1
July	0	0	0	145378	0	1
August	0	0	0	145378	0	1
September	0	0	0	145378	0	1
October	0	0	0	145378	0	1
November	0	0	0	145378	0	1
December	0	0	0	145378	0	1
Total 1991	0	0	3028	145378	0	1

JICARILLA "K" #14

Chacra

Date Completed:	10/06/71
Perforations:	3950'-3980'
Zone Temperature:	126 F
Gas Gravity:	0.0667
SITP: (7/1/90)	310 (110 Day SI)
Calculated BHP:	313 psi
1900 Production:	1857 MCF
Latest Test Rate:	16 MCFD

Based on latest test, the Chacra would contribute 19.3% of the commingled production.

Submit 2 copies to Appropriate
District Office.
DISTRICT
P.O. Box 1980, Hobbs, NM 88240

State of New Mexico
Energy, Minerals and Natural Resources Department

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210
DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

GAS-OIL RATIO TEST

EX ENG.

Form C-116
Revised 1/1/89

APR 30 1991

OIL CONSERVATION DIVISION

GAS-OIL RATIO TEST

Operator		Pool		County												
Southern Union Exploration		Otero Chacra		Rio Arriba												
Address		TYPE OF TEST - (X)		Completion		Special										
324 Hwy US #64, NBU 3001, Farmington, NM 87401						XX										
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	PLATE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU FT/BBL.			
		U	S	T						R	WATER BBLs.	GRAV. OIL		OIL BBLs.	GAS M.C.F.	
Jicarilla K	14	0	11	25	05	01-25-91	F	.250	197	----	24	0	NA	0	16	NA

Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

(See Rule 301, Rule 1116 & appropriate pool rules.)

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

Signature _____

Martin D. Boggs Drilling & Production Sup
Printed name and title

April 26, 1991 (505) 327-4481
Date Telephone No

JICARILLA K14 CHACRA

STATIC BOTTOM-HOLE PRESSURE DETERMINATION

Input Data:

Surface Temperature	60.0	deg.F
Bottom-Hole Temperature	120.0	deg.F
Shut-In Well Head Pressure	310.0	psi
Well Depth	3980.0	ft.
Gas Gravity	0.0667	

Critical Temp = 187.211 degR
Critical Pres = 690.599 psi

Zws = 1.6393 (reservoir conditions)
Zms = 1.0012 (well midpoint conditions)

Formation Volume Factor = 11.63 SCF/cu.ft.

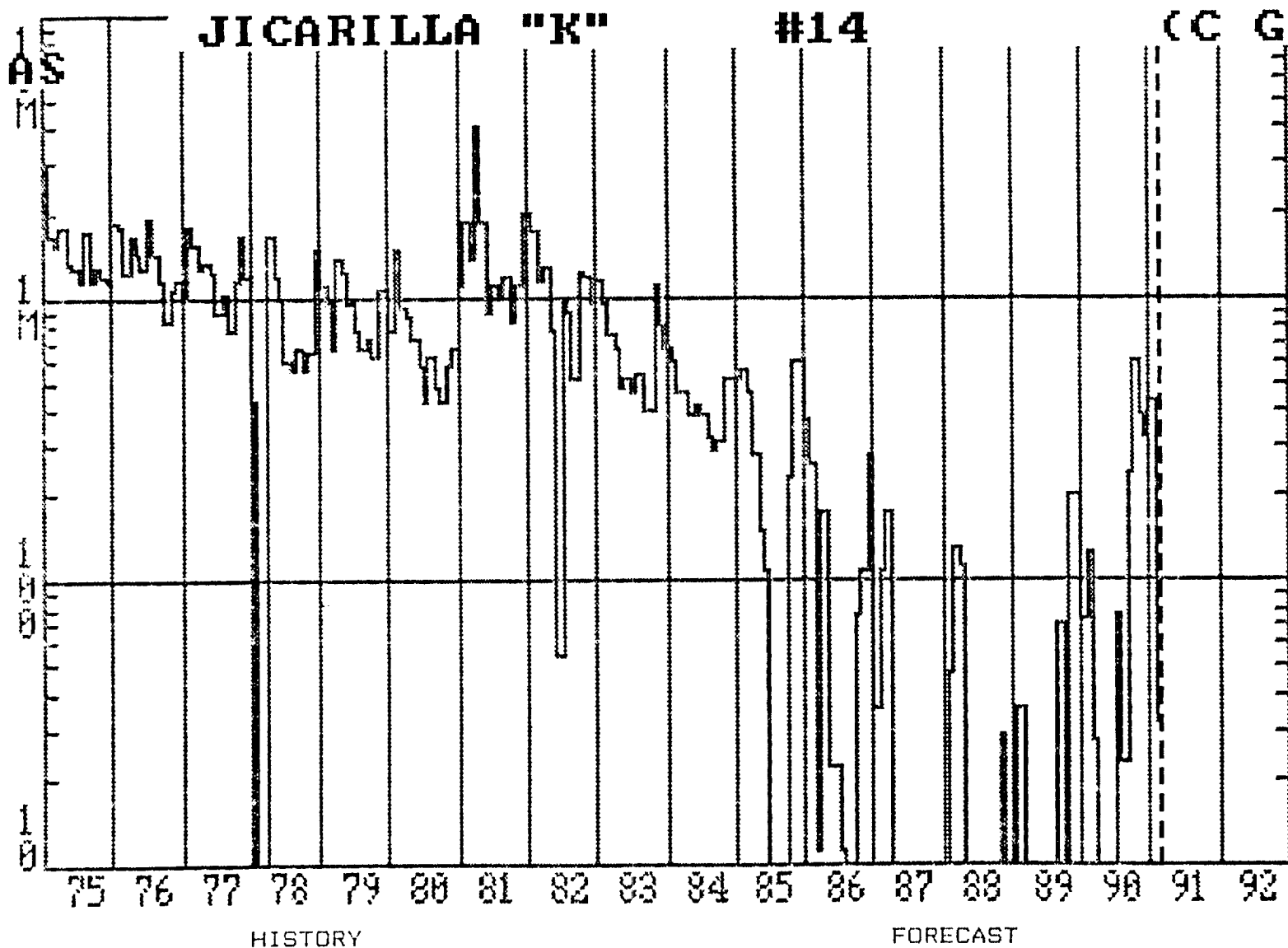
STATIC BOTTOM-HOLE PRESSURE = 312.53 psi

GCNM METER NO. 7157-74
SX NUMBER 1241120
SITP 310
SICP 0
SHUT-IN March 6, 1990
TURNED ON June 29, 1990
DAYS OFF 115

Property Code: 1241120

Location: RIO ARRIBA COUNTY, NM
Field: OTERO
Formation: CHACRA

PRODUCTION RATE HISTORY/ FORECAST



1st Production Date. Jan 1975
Last Production Date Apr 19 91
Completion Date.....
Cum. since Date.....
Cum..... 225.906 mmcf
Upper Perf.....
Lower Perf.....
Total Depth.....

Projected Decline... Exponential
Initial Rate..... 1.000 mmcf
Ending Rate..... 1.000 mmcf
Projected Reserves.. mmcf
Decline Rate..... 15.056 %
Projected Life..... 0 yrs 0 mths
Hyperbolic Constant.
First Date of Proj.. Mar 1991
Last Date of Proj... Jan 1991

Ultimate recovery (cum + projected): 225.906 mmcf

Property data from file: JICK14.DMP

Operator (#)		Lease name		Well #	
		JICARILLA K #14		(CH)	
Ident. #	State	Dist	County	Location	Lse/tax /unit #
1241120	NM(NM)		RIO ARRIBA		
API #		Field (#)		Reservoir	
00-000-00000		OTERO			
Total Depth	Perforations		Temp Gradient	N-Factor	GOR
0	Upper	Lower	0.000	0.000	0
0	0	0			
Comp Date	Production Dates		Status Date	Status	
0	First	Last	0		
0	0	0			
Cumulative gas MCF		Since	Gas Gravity	Gas Gatherer	
225906		FP Date	0.00		
Cumulative liquid BBL		Since	Liquid Gravity	Liquid Gatherer	
0		FP Date	0.00		

Dwight's Energydata, Inc. DLOOK 4.20 Record # 1 Run date: 04/26/91
 Production data from file: JICK14.DMP Retrieval code: ,1241120
 Lease: JICARILLA K #14 (CH) Well #:

Month	Oil bbls	Cum Oil bbls	Gas mcf	Cum Gas mcf	Water bbls	No.of Wells
Total 1975	0	0	18002	113411	0	1
Total 1976	0	0	16594	130005	0	1
Total 1977	0	0	14805	144810	0	1
Total 1978	0	0	8704	153514	0	1
Total 1979	0	0	11144	164658	0	1
Total 1980	0	0	8501	173159	0	1
Total 1981	0	0	18243	191402	0	1
Total 1982	0	0	12670	204072	0	1
Total 1983	0	0	8163	212235	0	1
Total 1984	0	0	5337	217572	0	1
Total 1985	0	0	3485	221057	0	1
Total 1986	0	0	1363	222420	0	1
Total 1987	0	0	322	222742	0	1
January	0	0	0	222742	0	1
February	0	0	47	222789	0	1
March	0	0	129	222918	0	1
April	0	0	113	223031	0	1
May	0	0	0	223031	0	1
June	0	0	0	223031	0	1
July	0	0	0	223031	0	1
August	0	0	8	223039	0	1
September	0	0	0	223039	0	1
October	0	0	1	223040	0	1
November	0	0	29	223069	0	1
December	0	0	0	223069	0	1
Total 1988	0	0	327	223069	0	1
January	0	0	0	223069	0	1
February	0	0	35	223104	0	1
March	0	0	0	223104	0	1
April	0	0	0	223104	0	1
May	0	0	0	223104	0	1
June	0	0	0	223104	0	1
July	0	0	0	223104	0	1
August	0	0	2	223106	0	1
September	0	0	71	223177	0	1

Dwight's Energydata, Inc. DLOOK 4.20

Record # 1

Run date: 04/26/91

Production data from file: JICK14.DMP

Retrieval code:

,,1241120

Lease: JICARILLA K

#14

(CH)

Well #:

Month	Oil bbls	Cum Oil bbls	Gas mcf	Cum Gas mcf	Water bbls	No. of Wells
October	0	0	0	223177	0	1
November	0	0	203	223380	0	1
December	0	0	203	223583	0	1
Total 1989	0	0	514	223583	0	1
January	0	0	73	223656	0	1
February	0	0	127	223783	0	1
March	0	0	28	223811	0	1
April	0	0	0	223811	0	1
May	0	0	0	223811	0	1
June	0	0	0	223811	0	1
July	0	0	75	223886	0	1
August	0	0	23	223909	0	1
September	0	0	240	224149	0	1
October	0	0	587	224736	0	1
November	0	0	383	225119	0	1
December	0	0	321	225440	0	1
Total 1990	0	0	1857	225440	0	1
January	0	0	434	225874	0	1
February	0	0	32	225906	0	1
March	0	0	0	225906	0	1
April	0	0	0	225906	0	1
May	0	0	0	225906	0	1
June	0	0	0	225906	0	1
July	0	0	0	225906	0	1
August	0	0	0	225906	0	1
September	0	0	0	225906	0	1
October	0	0	0	225906	0	1
November	0	0	0	225906	0	1
December	0	0	0	225906	0	1
Total 1991	0	0	466	225906	0	1

