

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

RECEIVED

NOV 24 2008

Sundry Notices and Reports on Wells

1. **Type of Well**
GAS

2. **Name of Operator**
BURLINGTON
RESOURCES OIL & GAS COMPANY LP

3. **Address & Phone No. of Operator**

P.O. Box 4289, Farmington, NM 87499

4. **Location of Well, Footage, Sec., T, R, M**

Unit I (NESE), 1555' FSL & 1210' FEL, Section 30, T29N, R9W, NMPM

5. **Lease Number**
NMSF-080781

6. **If Indian, All. or
Tribe Name**

7. **Unit Agreement Name**

8. **Well Name & Number**
Cain 16E

9. **API Well No.**

30-045-36850 25740

10. **Field and Pool**
Basin Dakota

11. **County and State**
San Juan Co., NM

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

Type of Submission
☒ Notice of Intent

Type of Action

☐ Abandonment

☐ Change of Plans

☒ Other - Request Non-repair BH

☐ Subsequent Report

☐ Recompletion

☐ New Construction

☐ Plugging

☐ Non-Routine Fracturing

☐ Final Abandonment

☐ Casing Repair

☐ Water Shut off

☐ Altering Casing

☐ Conversion to Injection

RCVD JAN 7 '09

OIL CONS. DIV.

DIST 3

13. Describe Proposed or Completed Operations

Burlington Resources requests to not repair the bradenhead on subject well. Per notice from the OCD, reference: RBDMS KGR0828054016 repair of bradenhead was to be completed by 1/9/2009. We wish not to repair the bradenhead based on the on the following proposal

Attached: gas analysis, wellbore schematic, bradenhead test results

ACCEPTED FOR OCD
RECORD ONLY

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

Signed

Tracey N. Monroe

Tracey N. Monroe

Title Staff Regulatory Technician

Date 11/24/08

(This space for Federal or State Office use)

APPROVED BY

Title

Date

CONDITION OF APPROVAL, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NMOCD

Cain #16E
Proposal to Not Repair Bradenhead

ConocoPhillips would like to request an exemption from performing remedial work on the bradenhead on the Cain #16E for the following reasons:

- *Bradenhead water contains low Chloride content* - The water sample from the bradenhead shows freshwater with 100 mg/L of Chloride compares to the Dakota water sample of 8,000 mg/L (Chloride content: Fruitland Coal = 1550 mg/L, Pictured Cliffs = 2060 mg/L, Mesa Verde = 10000 mg/L). *See Standard API Water Analysis report.*
- *Significant pressure differences between the producing casing and the bradenhead* - Shut-in pressure casing = 570 psig; Shut-in pressure bradenhead = 43 psig (*see bradenhead test report*). Casing pressure does not change while bradenhead blowing as indicated by test. (*Note: Casing pressure stayed constant at 570 throughout the 30 minutes test. Field personnel mistakenly entered 579 psig instead of 570 on the report.*)
- *No gas produced* – continuous water flow and no presence of gas in the bradenhead during the 30 minutes test (*see bradenhead test report*).
- *Good Cement* - approximately 2000 feet of good cement bond between the top perforation and the surface bradenhead indicated by cement bond log.

According to the water sample from the bradenhead that was analyzed from Mitchell Analytical Laboratory, it is clear that the water from the bradenhead is not from the producing zone. Pressure reading taken during the bradenhead test indicates that there is not an integrity issue with the casing because there is a significant pressure difference in the casing and the bradenhead. Furthermore, this well is in an area known for artesian water flow. ConocoPhillips would like to request an exemption from performing remedial work on the bradenhead, and ConocoPhillips will continue to monitor the wellhead pressure as normal, and if there is any trace of gas in the bradenhead OCD will be notified immediately. The company will continue to operate in a safe and environmentally friendly manner.

Pertinent data and all relevant information and document are included in the following pages.

Sincerely,
Paul Nguyen
ConocoPhillips
Production Engineer

MITCHELL ANALYTICAL LABORATORY

2638 Faudree
Odessa, Texas 79765-8538
561-5579

Company: **Nalco Company**

Well Number: Cain 16E
Lease: COPC
Location:
Date Run: 10/29/2008
Lab Ref #: 08-oct-n43366
Sr = 1.76 ppm

Sample Temp: 70
Date Sampled: 10/20/2008
Sampled by: Randy Shipp
Employee #:
Analyzed by: DOM

Dissolved Gases

		Mg/L	Eq. Wt.	MEq/L
Hydrogen Sulfide	(H ₂ S)	52.00	16.00	3.25
Carbon Dioxide	(CO ₂)	.00	22.00	.00
Dissolved Oxygen	(O ₂)	NOT ANALYZED		

Cations

Calcium	(Ca++)	43.82	20.10	2.18
Magnesium	(Mg++)	25.91	12.20	2.12
Sodium	(Na+)	3,394.82	23.00	147.60
Barium	(Ba++)	1.37	68.70	.02
Manganese	(Mn+)	.09	27.50	.00

Anions

Hydroxyl	(OH-)	.00	17.00	.00
Carbonate	(CO ₃ =)	.00	30.00	.00
BiCarbonate	(HCO ₃ -)	244.40	61.10	4.00
Sulfate	(SO ₄ =)	7,100.00	48.80	145.49
Chloride	(Cl-)	100.11	35.50	2.82
Total Iron	(Fe)	7.14	18.60	.38
Total Dissolved Solids		10,969.66		
Total Hardness as CaCO ₃		215.78		
Conductivity MICROMHOS/CM		15,120		

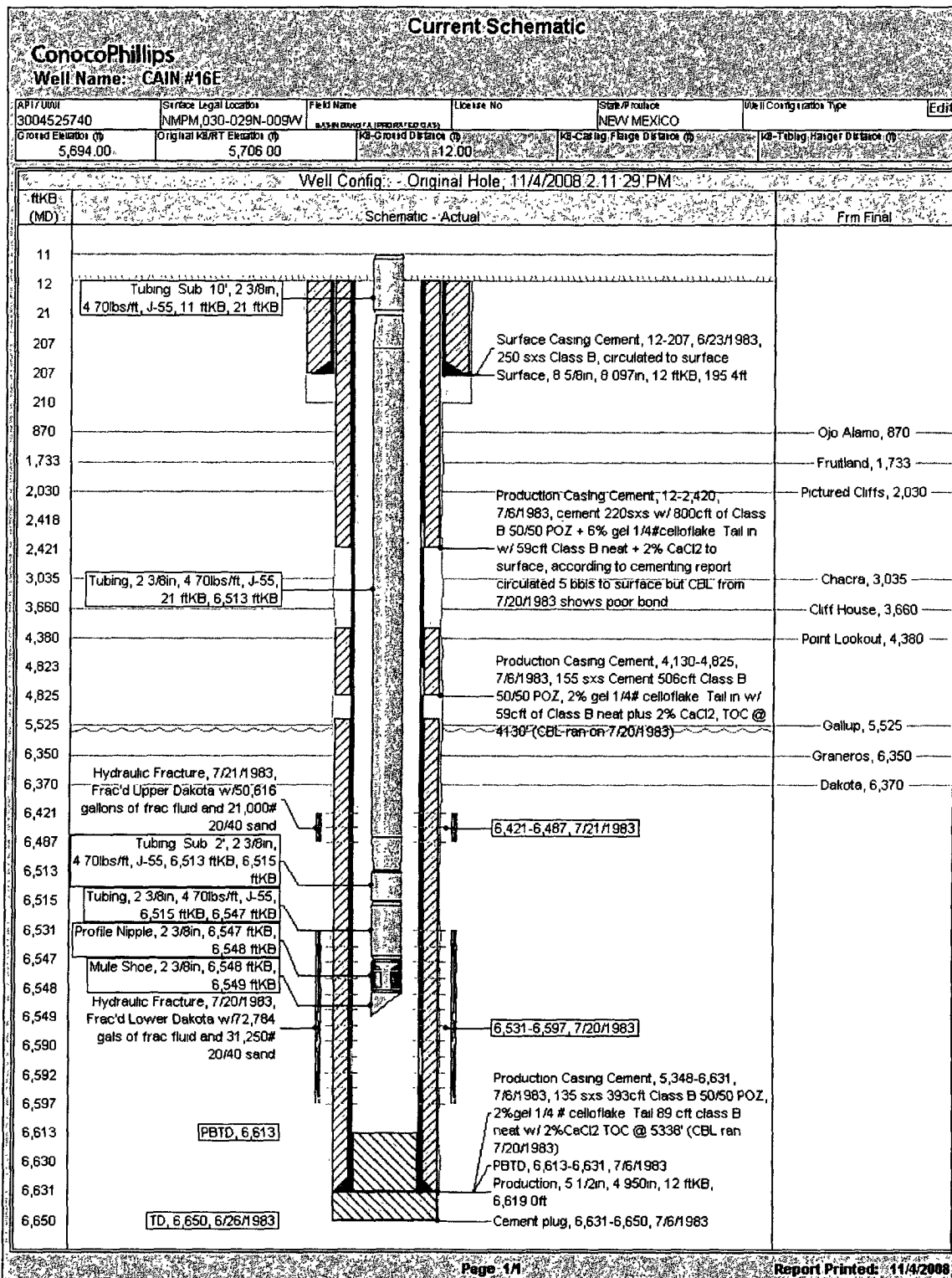
pH 8.170 Specific Gravity 60/60 F. 1.008

CaSO₄ Solubility @ 80 F. 2.70MEq/L, CaSO₄ scale is unlikely

CaCO₃ Scale Index

70.0	-.287	100.0	.053	130.0	.613
80.0	-.167	110.0	.313	140.0	.613
90.0	.053	120.0	.313	150.0	.893

Nalco Company



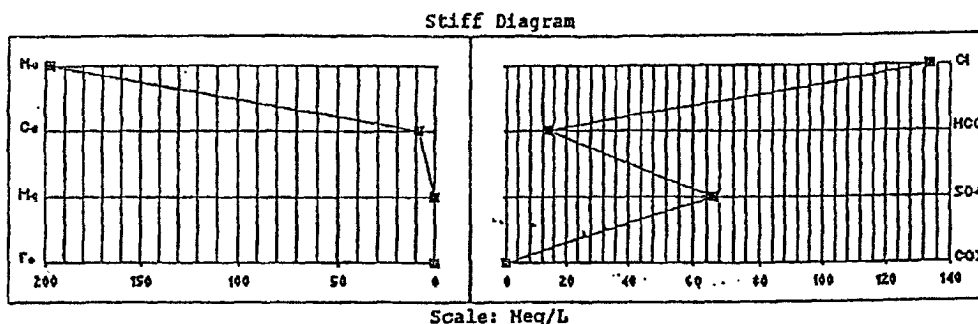


1995 study

The Stiff Diagram

Examples of the Stiff Diagrams of Different Water Formations

A Typical Dakota Formation Diagram
(Average of 43 samples)



ANIONS

Na-Sodium

Ca-Calcium

Mg-Magnesium

Fe-Iron

CATIONS

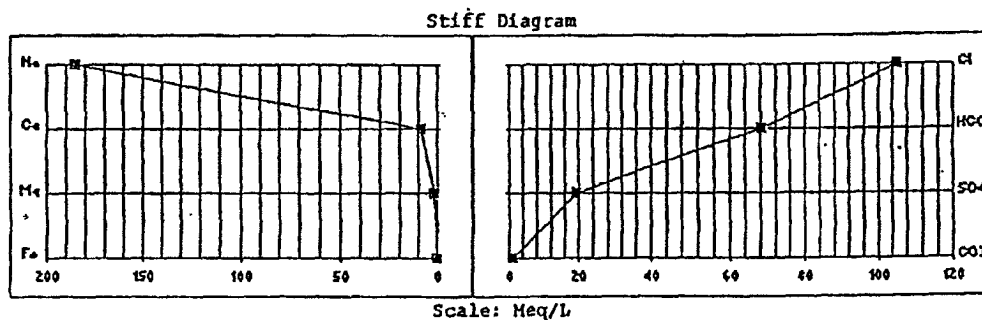
Cl-Chloride

HCO3-Bicarbon.

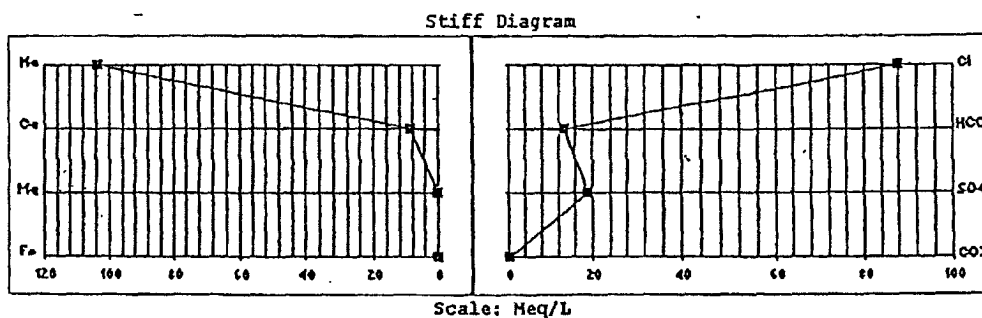
SO4-Sulfate

CO3-Carbonate

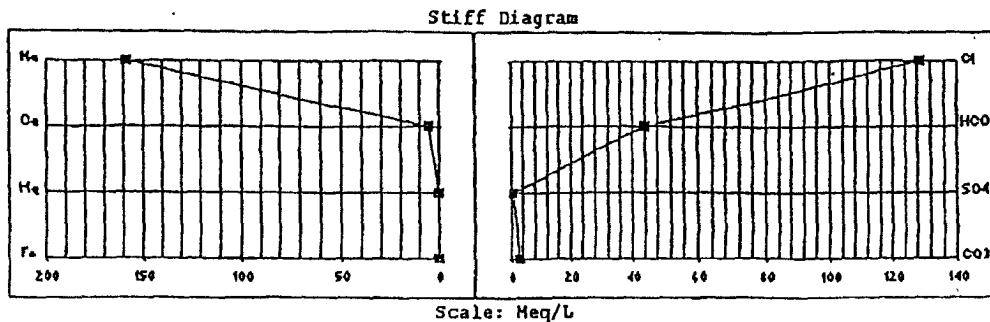
A Typical Fruitland Coal Formation Diagram
(Average of 21 samples)



A Typical Mesa Verde Formation Diagram
(Average of 33 samples)



A Typical Pictured Cliffs Formation Diagram
(Average of 14 samples)



1115 Farmington Avenue - Farmington, NM 87401
(505) 325-1085

Lab Number:

BASIN EC

Standard A.P.I. Water Analysis Report

Company: 0

Date Collected: 8/10/95

Sample ID: 0

Date Received: 1/0/00

Formation: 0

Date Analyzed: 1/0/00

Location: #####

County: 0:00 State: 0:00

Collected By: 0

Analyst: 0

Remarks: 0

Attention: 0

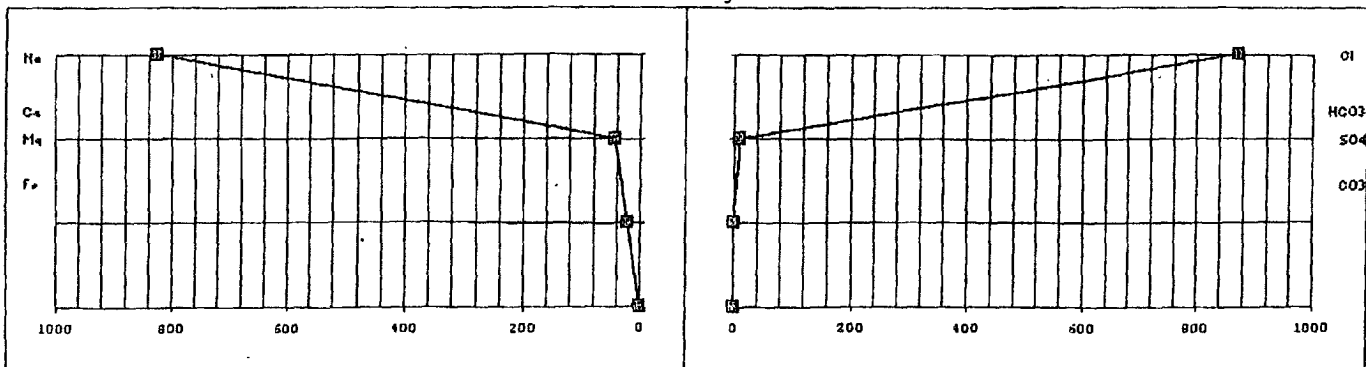
PARAMETER	as ION	Comment	PARAMETER	as ION	Comment
Sodium, Na	19,000 mg/l		Chloride, Cl	30,900 mg/l	
Potassium, K	890 mg/l		Sulfate, SO ₄	0 mg/l	
Calcium, Ca	874 mg/l		Hydroxide, OH	0 mg/l	
Magnesium, Mg	250 mg/l		Carbonate, CO ₃	0 mg/l	
Iron, Fe (total)	mg/l	NOT RUN	Bicarbonate, HCO ₃	690 mg/l	
Sulfide	mg/l	NOT RUN	Resistivity	0.14 ohm-m	
pH	6.8 units		Conductivity	72,000 uS/cm	
Total Dissolved Solids	52,400 mg/l			(@25 Degrees C)	
			Specific Gravity	1.039	
				(@60 Degrees F)	

Remarks:

Anion/Cation:

97%

Stiff Diagram



Scale: Meq/L

1115 Farmington Avenue - Farmington, NM 87401
(505) 325-1085

Lab Number:

FC

Standard A.P.I. Water Analysis Report

Company: 0

Date Collected: 8/10/95

Sample ID: 0

Date Received: 1/0/00

Formation: 0

Date Analyzed: 1/0/00

Location: #####

County: 0:00 State: 0:00

Collected By: 0

Analyst: 0

Remarks: 0

Attention: 0

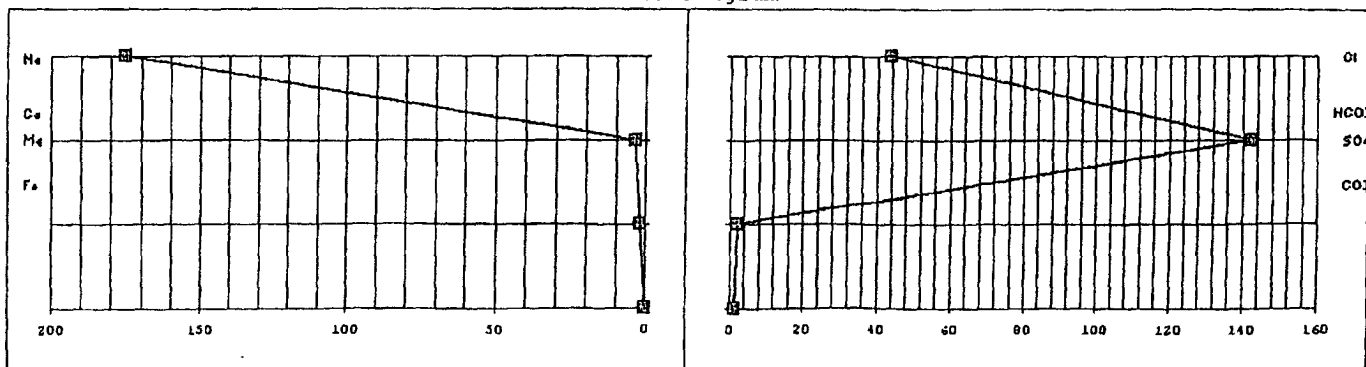
PARAMETER	as ION	Comment	PARAMETER	as ION	Comment
Sodium, Na	4,030 mg/l		Chloride, Cl	1,550 mg/l	
Potassium, K	30 mg/l		Sulfate, SO ₄	100 mg/l	
Calcium, Ca	70 mg/l		Hydroxide, OH	0 mg/l	
Magnesium, Mg	20 mg/l		Carbonate, CO ₃	40 mg/l	
Iron, Fe (total)		NOT RUN	Bicarbonate, HCO ₃	8,700 mg/l	
Sulfide		NOT RUN	Resistivity	0.75 ohm-m	
pH	8.0 units		Conductivity	14,800 uS/cm	
Total Dissolved Solids	10,450 mg/l			(@25 Degrees C)	
			Specific Gravity	1.012	
				(@60 Degrees F)	

Remarks:

Anion/Cation:

105%

Stiff Diagram



Scale: Meq/L

1115 Farmington Avenue - Farmington, NM 87401
(505) 325-1085

Lab Number:

FC/PC

Standard A.P.I. Water Analysis Report

Company: 0

Date Collected: 8/10/95

Sample ID: 0

Date Received: 1/0/00

Formation: 0

Date Analyzed: 1/0/00

Location: #####

County: 0:00 State: 0:00

Collected By: 0

Analyst: 0

Remarks: 0

Attention: 0

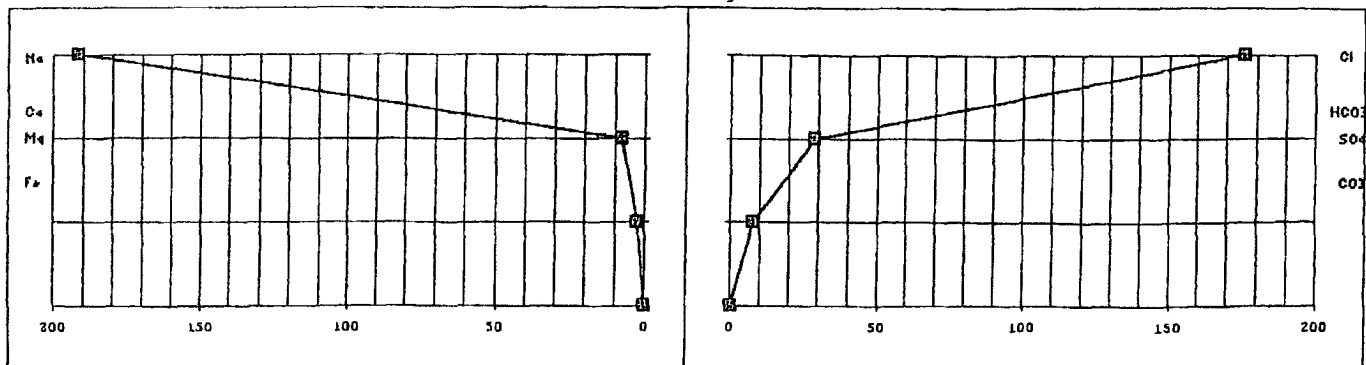
PARAMETER	as ION	Comment	PARAMETER	as ION	Comment
Sodium, Na	4,400 mg/l		Chloride, Cl	6,230 mg/l	
Potassium, K	250 mg/l		Sulfate, SO ₄	375 mg/l	
Calcium, Ca	150 mg/l		Hydroxide, OH	0 mg/l	
Magnesium, Mg	30 mg/l		Carbonate, CO ₃	10 mg/l	
Iron, Fe (total)		NOT RUN	Bicarbonate, HCO ₃	1,770 mg/l	
Sulfide		NOT RUN	Resistivity	0.59 ohm-m	
pH	7.9 units		Conductivity	19,540 uS/cm	
Total Dissolved Solids	12,800 mg/l			(@25 Degrees C)	
			Specific Gravity	1.011	
				(@60 Degrees F)	

Remarks:

Anion/Cation:

102%

Stiff Diagram



Scale: Meq/L

1115 Farmington Avenue - Farmington, NM 87401
(505) 325-1085

Lab Number:

PC

Standard A.P.I. Water Analysis Report

Company: 0 Date Collected: 8/10/95
Sample ID: 0 Date Received: 1/0/00
Formation: 0 Date Analyzed: 1/0/00
Location: ##### County: 0:00 State: 0:00
Collected By: 0 Analyst: 0
Remarks: 0

Attention: 0

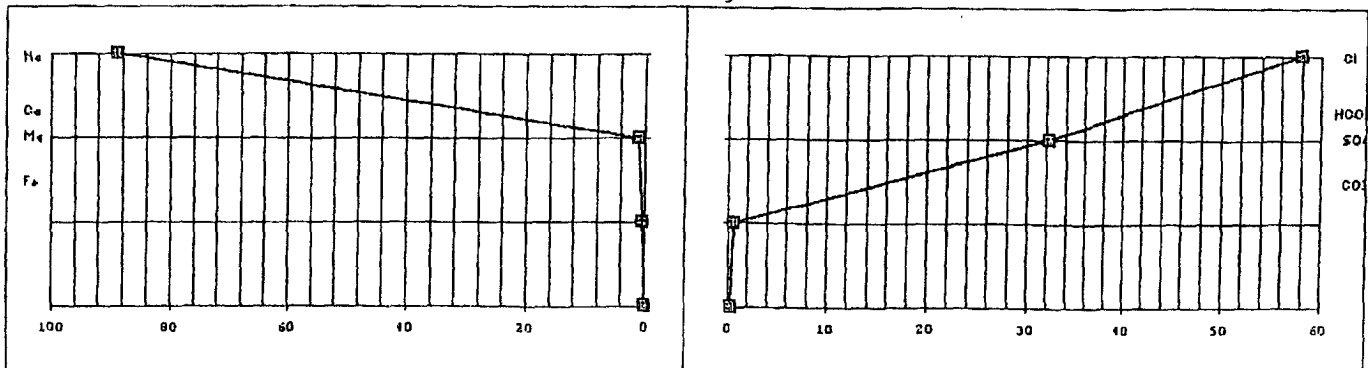
PARAMETER	as ION	Comment	PARAMETER	as ION	Comment
Sodium, Na	2,040	mg/l	Chloride, Cl	2,060	mg/l
Potassium, K	30	mg/l	Sulfate, SO4	30	mg/l
Calcium, Ca	20	mg/l	Hydroxide, OH	0	mg/l
Magnesium, Mg	5	mg/l	Carbonate, CO3	10	mg/l
Iron, Fe (total)		mg/l NOT RUN	Bicarbonate, HCO3	1,970	mg/l
Sulfide		mg/l NOT RUN	Resistivity	1.29	ohm-m
pH	8.0	units	Conductivity	8,820	uS/cm
Total Dissolved Solids	5,820	mg/l	Specific Gravity	1.006	
					(@25 Degrees C)
					(@60 Degrees F)

Remarks:

Anion/Cation:

100%

Stiff Diagram



Scale: Meq/L

1115 Farmington Avenue - Farmington, NM 87401
(505) 325-1085

Lab Number:

MV

Standard A.P.I. Water Analysis Report

Company: 0 Date Collected: 8/10/95
Sample ID: 0 Date Received: 1/0/00
Formation: 0 Date Analyzed: 1/0/00
Location: ##### County: 0:00 State: 0:00
Collected By: 0 Analyst: 0
Remarks: 0

Attention: 0

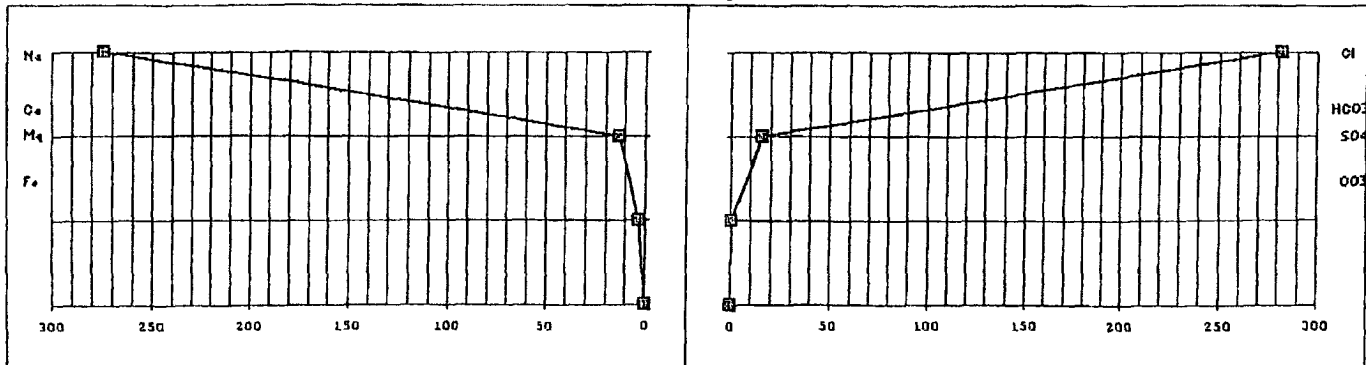
PARAMETER	as ION	Comment	PARAMETER	as ION	Comment
Sodium, Na	6,300 mg/l		Chloride, Cl	10,000 mg/l	
Potassium, K	200 mg/l		Sulfate, SO ₄	30 mg/l	
Calcium, Ca	250 mg/l		Hydroxide, OH	0 mg/l	
Magnesium, Mg	35 mg/l		Carbonate, CO ₃	0 mg/l	
Iron, Fe (total)		NOT RUN	Bicarbonate, HCO ₃	970 mg/l	
Sulfide		NOT RUN	Resistivity	0.47 ohm-m	
pH	7.3 units		Conductivity	26,900 uS/cm	
Total Dissolved Solids	17,830 mg/l			(@25 Degrees C)	
			Specific Gravity	1.015	
				(@60 Degrees F)	

Remarks:

Anion/Cation:

1018

Stiff Diagram



Scale: Meq/L

1115 Farmington Avenue - Farmington, NM 87401
(505) 325-1085

Lab Number:

DK

Standard A.P.I. Water Analysis Report

Company: 0

Date Collected: 8/10/95

Sample ID: 0

Date Received: 1/0/00

Formation: 0

Date Analyzed: 1/0/00

Location: #####

County: 0:00 State: 0:00

Collected By: 0

Analyst: 0

Remarks: 0

Attention: 0

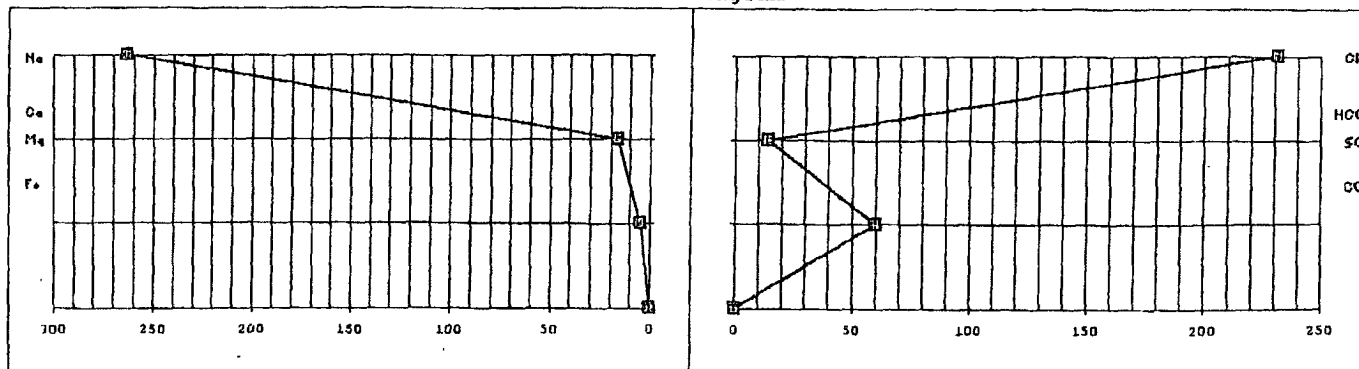
PARAMETER	as ION	Comment	PARAMETER	as ION	Comment
Sodium, Na	6,060 mg/l		Chloride, Cl	8,200 mg/l	
Potassium, K	240 mg/l		Sulfate, SO4	2,900 mg/l	
Calcium, Ca	330 mg/l		Hydroxide, OH	0 mg/l	
Magnesium, Mg	55 mg/l		Carbonate, CO3	0 mg/l	
Iron, Fe (total)	mg/l	NOT RUN	Bicarbonate, HCO3	880 mg/l	
Sulfide	mg/l	NOT RUN	Resistivity	0.52 ohm-m	
pH	7.3 units		Conductivity	24,400 uS/cm	
Total Dissolved Solids	18,670 mg/l			(@25 Degrees C)	
			Specific Gravity	1.016	
				(@60 Degrees F)	

Remarks:

Anion/Cation:

105%

Stiff Diagram



Scale: Meq/L

API No: 3004525740000

Approved Date: 9/8/2008 7:34:00 AM

Approve

Well Name: CAIN, GE

Rejected Date:

Reject

Foreman: 22 Mike O'Hanrahan

Submitted Date: 9/8/2008 8:56:00 AM

Test History

Route/MSO: 208 David Baker

Delete

Test Date 8/29/2008

Initial Tubing 569

Intermediate 0

Flow Status Shut-In

Pressures Casing 570

Bradenhead 43

Testing Time (minutes)	Pressures			Intermediate		Flow Desc		Water Flow	
	Bradenhead BHD	INT	CSG	INT	CSG	BH	INT	BH	INT
5	5	0	570			☒	☐	☒	☐
10	5	0	570			☐	☐	☐	☐
15	5	0	570			☐	☐	☐	☐
20	5	0	570			☐	☐	☐	☐
25	5	0	570			☐	☐	☒	☐
30	5	0	579			☐	☐	☐	☐
5 Min SI	15					☒	☐	☐	☐

Remarks (255 char max)

Test Entry Date: 8/29/2008 2:34:00 PM

Tested by:

Witness:

Close

OIL CONSERVATION DIVISION

1000 Rio Brazos Road
Aztec, New Mexico

API 30-045-25740

BRADENHEAD TEST REPORT

(Submit 2 copies to above address)

Date of Test 3/28/2002 Operator Burlington Resources Oil & Gas

Lease Name CAIN Well No 16E Location: U I Sec. 30 Twp. 029N Rge. 009W

Pressure (Shut-in) Dwt Tubing 416 Intermediate Casing 418 Bradenhead 124

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH.

TIME:	PRESSURES:		BRADENHEAD FLOWED:	INTERMEDIATE FLOWED:
	INTERMEDIATE	CASING		
5 Min.		418	Steady Flow <u>X</u>	
10 Min.		418	Surges <u> </u>	
15 Min.		418	Down to Nothing <u> </u>	
20 Min.		418	Nothing <u> </u>	
25 Min.		418	Gas <u>X</u>	
30 Min.		418	Gas & Water <u> </u>	
			Water <u> </u>	

If Bradenhead flowed water, check description below:

Clear
Fresh
Salty
Sulfur
Black

Remarks: Whisper
Ending: BH Press.: Intern. Press.
BH valve closed for more than a year. 2psi @ 5 min, 1 psi @ 10 min, less than 1 psi during remainder of test. BH built to 2 psi after 5 min St.

By DAVID BIXLER 372
Lease Operator

Position

Witness

1000 Rio Brazos Road
Aztec, New Mexico

BRADENHEAD TEST REPORT

(Submit 2 copies to above address)

Date of Test 5/28/2005 Operator Burlington Resources Oil & Gas

Lease Name CAIN Well No 16E Location: U 1 Sec. 30 Twp. 029N Rge. 009W

Pressure (	Flowing	) Dwt	Tubing	153	Intermediate	Casing	167	Bradenhead	0
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OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH.

TIME:	PRESSURES:		BRADENHEAD FLOWED:	INTERMEDIATE FLOWED:
	INTERMEDIATE	CASING		
5 Min.		167	Steady Flow	
10 Min.		167	Surges	
15 Min.		167	Down to Nothing	
20 Min.			Nothing	X
25 Min.			Gas	
30 Min.			Gas & Water	
			Water	

If Bradenhead flowed water, check description below:

Clear _____

Fresh _____

Salty _____

Sulfur _____

Black _____

Remarks: _____
 Ending: BH Press.: _____ Intern. Press. _____
 Bradenhead had 0 _____
 psi. _____

By DAVID BIXLER 372
Lease Operator

 Position

Witness