

ConocoPhillips Company
3401 E. 30th Street
Farmington, NM 87402



Monica Kuehling
Oil Conservation Division
1000 Rio Brazos Rd
Aztec, NM 87410

April 20, 2011

RE: Harrington 6
API# 30-039-23871
Sec. 31, T27N, R7W
Lease #: SF-080511
Reference: RBDMS MPK1104749490



Dear Ms. Kuehling:

On February 24, 2011 a letter was received regarding the subject well indicating a bradenhead failure and requesting remedial activity. A proposal to not repair the intermediate casing is attached for your review. Also attached are a current wellbore schematic, water analysis and the two most recent bradenhead tests.

If further detail or information is needed regarding the subject well please contact me at 326-9837.

Sincerely,

A handwritten signature in cursive script that reads 'Crystal Tafoya'.

Crystal Tafoya
Staff Regulatory Technician

B.P. Repair not required, test bradenhead annually to
monitor pressure for any increase.

AE



Bradenhead Summary

Production Engineering

FROM: Jessie Dutko

DATE: April 2011

RE: Harrington 6 Bradenhead Testing Summary (Not Requiring Remedial Work)

Subject:

On February 17, 2011, ConocoPhillips received a letter from the New Mexico Oil Conservation Division (NMOCD) stating that the 2010 bradenhead test performed on the Harrington 6 indicated a failure. The letter stated that a steady flow of clear water flowed from the bradenhead valve and a copy of the analysis done on the fluid was not sent to the NMOCD. Previous bradenhead tests back to 1998 show a steady flow of liquid coming from the bradenhead with similar pressures. A 2011 water analysis shows similar water composition as seen in a sample taken in 2007. Stiff Diagram analysis of the water samples taken from the Harrington 6 show a freshwater sample that does not match other water formation zones. Past bradenhead tests also demonstrate casing integrity with no communication between the production casing and the bradenhead. Fluid sample and Stiff Diagram analysis, wellbore diagrams, and the two previous bradenhead tests are presented below. ConocoPhillips believes with these conditions groundwater is not being impacted and that remediation is not necessary.

Jessie Dutko

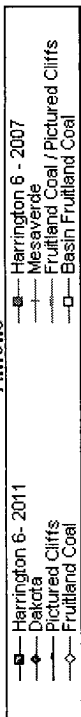
Production Engineer

Harrington 6 Bradenhead Water Compared

Cations



Anions



Harrington 6 Bradenhead Water Stiff Diagram History

Cations



Anions





BJ SERVICES **Farmington District Lab** **Water Analysis Report**

Test # 0

Customer/Well Information

Company:	Conoco Phillips	Date:	10/10/2007
Well Name:	Harrington #6	Prepared for:	Trevor Coleman
Location:	00-000-00000	Submitted by:	Trevor Coleman
State:	County,	Prepared by:	Cassandra Begay
Formation:	unknown	Water Type:	0
Depth:	0		

Background Information

Reason for Testing: routine

Completion type:

Well History:

Comments:

Sample Characteristics

Sample Temp:	75 (°F)	Viscosity:	1cP
pH:	12.82	Color:	Clear
Specific Gravity:	0.995	Odor:	None
S.G. (Corrected):	0.998 @ 60 °F	Turbidity:	None
Resistivity (Meas.):	4.50 Ω-m	Filtrates:	None

Sample Composition

CATIONS	mg/l	me/l	ppm
Sodium (calc.)	728	31.7	732
Calcium	< .5	---	---
Magnesium	12	1.0	12
Barium	0	0.0	0
Potassium	2	0.1	2
Iron	1.00	0.0	1.01

ANIONS	mg/l	me/l	ppm
Chloride	270	7.6	271
Sulfate	590	12.3	593
Hydroxide	0	0.0	0
Carbonate	< 1	---	---
Bicarbonate	793	13.0	797

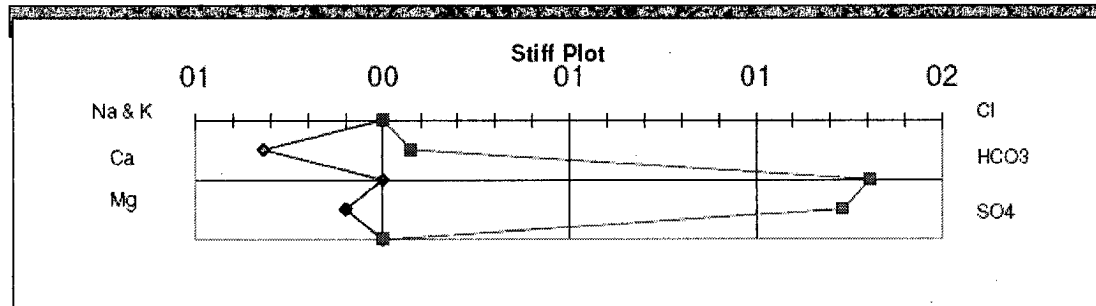
SUMMARY

Total Dissolved Solids(calc.)	2395		2407
Total Hardness as CaCO3	50	1.0	50

Scaling Tendencies

CaCO3 Factor 0 Calcium Carbonate Scale Probability --> REMOTE

CaSO4 Factor 0 Calcium Sulfate Scale Probability -----> REMOTE





envirotech
Analytical Laboratory

CATION / ANION ANALYSIS

Client:	ConocoPhillips	Project #:	96052-1706
Sample ID:	Braden Head	Date Reported:	04/06/11
Laboratory Number:	57767	Date Sampled:	03/31/11
Chain of Custody:	11449	Date Received:	03/31/11
Sample Matrix:	Aqueous	Date Analyzed:	04/01/11
Preservative:	Cool		
Condition:	Intact		

Parameter	Analytical Result	Units		
pH	11.9	s.u.		
Conductivity @ 25° C	2,850	umhos/cm		
Total Dissolved Solids @ 180C	1,160	mg/L		
Total Dissolved Solids (Calc)	1,170	mg/L		
SAR	371	ratio		
Total Alkalinity as CaCO3	< 0.01	mg/L		
Total Hardness as CaCO3	0.565	mg/L		
Bicarbonate as CaCO3	< 0.01	mg/L	0.000	meq/L
Carbonate as CaCO3	80.0	mg/L	2.67	meq/L
Hydroxide as CaCO3	230	mg/L	13.5	meq/L
Nitrate Nitrogen	0.500	mg/L	0.008	meq/L
Nitrite Nitrogen	0.004	mg/L	0.000	meq/L
Chloride	100	mg/L	2.82	meq/L
Fluoride	1.58	mg/L	0.083	meq/L
Phosphate	0.350	mg/L	0.011	meq/L
Sulfate	423	mg/L	8.80	meq/L
Iron	0.016	mg/L	0.001	meq/L
Calcium	0.195	mg/L	0.010	meq/L
Magnesium	0.019	mg/L	0.002	meq/L
Potassium	1.25	mg/L	0.032	meq/L
Sodium	641	mg/L	27.9	meq/L
Cations			27.9	meq/L
Anions			27.9	meq/L
Cation/Anion Difference			0.00%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments 2010 Well Testing/Harrington 6

Analyst

Review

**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
[http://emnrnd.state.nm.us/ocd/District III/3district.htm](http://emnrnd.state.nm.us/ocd/District%20III/3district.htm)

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

Date of Test 8/19/2010 Operator Burlington Resources API # 3003923871
Property Name HARRINGTON Well No. 8 Location: Unit K Section 31 Township 027N Range 007V
Well Status Flowing Initial PSI: Tubing 118 Intermediate Casing 141 Bradenhead 60

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

Testing TIME	PRESSURE					FLOW CHARACTERISTICS	
	BRADENHEAD			INTERM		BRADENHEAD	INTERMEDIATE
	BH	Int	Csg	Int	Csg		
5 min	60		141			Steady Flow	Y
10 min	60		141			Surges	
15 min	60		141			Down to Nothing	
20 min	60		141			Nothing	
25 min	60		141			Gas	
30 min	60		141			Gas & Water	
						Water	

If Bradenhead flowed water, check all of the descriptions that apply below:

CLEAR Y FRESH SALTY SULFUR BLACK

If Intermediate flowed water, check all of the descriptions that apply below:

CLEAR FRESH SALTY SULFUR BLACK

5 MINUTE SHUT-IN PRESSURE Bradenhead 60 Intermediate

REMARKS:

constant stream of clear liquid. Took large sample to envirotec for testing. Waiting on results

Tested By fitzgd Witness Yes

**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT**

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<http://emnr.state.nm.us/ocd/District/III/3district.htm>

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

Date of Test 5/17/2007 Operator Burlington Resources API # 3003923871
Property Name HARRINGTON Well No. 8 Location: Unit K Section 31 Township 027N Range 007W
Well Status Flowing Initial PSI: Tubing 107 Intermediate Casing 139 Bradenhead 57

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

Testing TIME	PRESSURE					FLOW CHARACTERISTICS	
	BRADENHEAD			INTERM		BRADENHEAD	INTERMEDIATE
	BH	Int	Csg	Int	Csg		
5 min	57		133			Steady Flow	Y
10 min	57		132			Surges	
15 min	57		130			Down to Nothing	
20 min	57		128			Nothing	
25 min	57		123			Gas	
30 min	57		122			Gas & Water	
						Water	Y

If Bradenhead flowed water, check all of the descriptions that apply below:

CLEAR Y FRESH Y SALTY SULFUR BLACK

If Intermediate flowed water, check all of the descriptions that apply below:

CLEAR FRESH SALTY SULFUR BLACK

5 MINUTE SHUT-IN PRESSURE Bradenhead 57 Intermediate

REMARKS:

Test witnessed by Monica w/ OCD~ sent water analysis 11/12/2007

Tested By gouldmh Witness Monica

Current Schematic

ConocoPhillips

Well Name: HARRINGTON #6

API/UNMI 3003923871	State Legal Location 2000-FSL 2220-FNL 31-0274-0000	Field Name OTERO CHACRA (GAS) #0576	License No.	State/Province NEW MEXICO	Well Configuration Type Edit
Ground Elevation (ft) 6,001.00	Original KB/RT Elevation (ft) 6,013.00	KB-Ground Distance (ft) 12.00	KB-Casing Flange Distance (ft) 6,013.00	KB-Tubing Hanger Distance (ft) 6,013.00	

Well Config: - Original Hole, 4/15/2011 2:53:14 PM

