Inspection Report For Well: UT20736 - 04641

U.S. Environmental Protection Agency
Underground Injection Control Program, 8ENF-T
999 18th Street, Suite 300, Denver, CO 80202-2466

This form was printed on 9/24/2013

INSPECTOR(S): Lead: Roberts, Sarah — Date: ~~10~~ 12/10/2013

Others: Ajayi, Christopher — Time: 1:15 am / pm

OPERATOR (only if different): _____

REPRESENTATIVE(S): Chad Stevinson

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name:	Ute Tribal 29-14		
Well Type:	Enhanced Recovery (2R)		
Operating Status:	AC (ACTIVE) as of 2/15/2002		
Oil Field:	Antelope Creek (Duchesne)		
Location:	SESW S29 T5S R3W		
Indian Country:	X, Uintah and Ouray		
Last Inspection:	7/13/2010	***Allowable Inj Pressure:***	1900 /
Last MIT:	Pass 10/3/2012	***Annulus Pressure From Last MIT:***	1950

BLACK = POSSIBLE VIOLATION — GREY = DATA MISSING

INSPECTION TYPE: (Select One)

- [ ] Construction / Workover
- [ ] Plugging
- [ ] Post-Closure
- [ ] Response to Complaint
- [x] Routine
- [ ] Witness MIT
- [ ] Other

ICIS Entered
Date 12/23/13
Initials DB

OBSERVED VALUES:

Tubing Gauge:	[x] Yes [ ] No	Pressure: U: 1740 / L: ____ psig Gauge Range: Scada psig	Gauge Owner:	[ ] EPA [x] Operator
Annulus Gauge:	[x] Yes [ ] No	Pressure: 0 psig Gauge Range: opened psig	Gauge Owner:	[x] EPA [ ] Operator
Bradenhead Gauge:	[ ] Yes [ ] No	Pressure: ____ psig Gauge Range: ____ psig	Gauge Owner:	[ ] EPA [ ] Operator
Pump Gauge:	[ ] Yes [ ] No	Pressure: ____ psig Gauge Range: ____ psig	Gauge Owner:	[ ] EPA [ ] Operator

Operating Status: (Select One)
- [x] Active
- [ ] Being Reworked
- [ ] Not Injecting
- [ ] Production
- [ ] Plugged and Abandoned
- [ ] Under Construction

GREEN	BLUE	CBI

See page 2 for photos, comments, and site conditions.

UIC Entered
Date 12/17/13
Initial

Inspection Report For Well: UT20736 - 04641 (PAGE 2)

PHOTOGRAPHS: ☐ Yes ☒ No List of photos taken: _____

Comments and site conditions observed during inspection: _____

GPS: GPS File ID: _____

Signature of EPA Inspector(s): _____ _____

☐ Data Entry ☐ Compliance Staff ☐ Hard Copy Filing

NOTICE OF INSPECTION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII, 999 18TH STREET - SUITE 500
DENVER, COLORADO 80202-2405

Date: 12/16/13
Hour: 8:00a

Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300f et seq.).

Firm Name: Petroglyph Operating, Inc.

Firm Address: Roosevelt, UT, Antelope Creek Oil Field

REASON FOR INSPECTION:

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable condition of permit or rule authorization.

SECTION 1445(b) of the SAFE DRINKING WATER ACT is quoted below:

Section 1445(b)(1): Except as provided in Paragraph (2), the Administrator, or representatives of the Administrator duly designated by him, upon presenting appropriate credentials, and a written notice to any supplier of water or other person subject to (a), or person subject (A) a national primary drinking water regulation prescribed under Section 1412(B) an applicable Underground Injection Control Program, or (C) any requirement to monitor an unregulated contaminant pursuant to subsection (a), or person in charge of any of the property of such supplier or other person referred to in clause (A), (B), or (C), is authorized to enter any establishment, ... facility, or other property of such supplier or other person in order to determine whether such supplier or other person has acted or is acting in compliance with this title, including for this purpose, inspection, at reasonable times, of records, files, papers, processes, controls, and facilities, or in order to test any feature of a public water system, including its raw water source. The Administrator or the Comptroller General (or any representative designated by either) shall have access for the purpose of audit and examination to any records, reports, or information of a grantee which are required to be maintained under subsection (a) or which are pertinent to any financial assistance under this title.

Sarah Roberts
Inspector's Name & Title (Print)

Inspector's Signature

EPA R8 3560-1 (8-89)

Original - Regional Office Copy
Yellow Copy - Operator Copy

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

JAN 17 2013

Ref: 8ENF-UFO

CERTIFIED MAIL 7009-3410-0000-2599-7655
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: Underground Injection Control (UIC)
Permission to Resume Injection
Ute Tribal 29-14 Well
EPA ID# UT20736-04641
API # 43-013-32201
Antelope Creek Oil Field
Duchesne County, UT

GREEN	BLUE	CBI
	/	

Dear Mr. Farnsworth:

On January 10, 2013, the Environmental Protection Agency (EPA) received information from Petroglyph Operating Company, Inc. on the above referenced well concerning the workover the followup mechanical integrity test (MIT) conducted on October 3, 2012. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. §144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before October 3, 2017.

Pursuant to 40 C.F.R. §144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless EPA is notified and procedures are described to EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. §300h. Such non-compliance may subject you to formal enforcement by EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Sarah Roberts at (303) 312-7056. Please direct all correspondence to the attention of Sarah Roberts at Mail Code 8ENF-UFO.

Sincerely,

Darcy O'Connor, Acting Director
UIC/FIFRA/OPA Technical Enforcement Programs

cc:

Irene Cuch, Jr., Chairwoman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Ronald Wopsock, Vice-Chairman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Reannin Tapoof, Assistant
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Stewart Pike, Councilman
Uintah & Ouray Business Committee
P.O. Box 190
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Richard Jenks, Councilman
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Frances Poowegup, Councilwoman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Phillip Chimburas, Councilman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Manuel Myore, Director of Energy,
Minerals and Air Programs
Ute Indian Tribe
P.O. Box 190
Fort Duchesne, Utah 84026

Mike Natchees, Environmental
Coordinator
Ute Indian Tribe
P.O. Box 190
Fort Duchesne, Utah 84026

John Rogers
Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114

Printed on Recycled Paper

bcc: Randy Brown (8P-TA)

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
PO Box 607
Roosevelt, UT 84066

JAN 17 2013

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Kelari Winterton ☐ Agent ☒ Addressee

B. Received by (*Printed Name*) Kelari Winterton
C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

ROOSEVELT UT 84066
JAN 22 2013
USPS

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (*Extra Fee*) ☐ Yes

2. Article Number (*Transfer from service label*) 7009 3410 0000 2599 7655

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

7009 3410 0000 2599 7655

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com®

OFFICIAL USE

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total P	

Postmark Here

Sent To Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
Street, Ap or PO Bo 4116 W 3000 S Ioka Lane
PO Box 607
City, Stat Roosevelt, UT 84066

PS Form 3800, August 2006 See Reverse for Instructions

Printed on Recycled Paper

hp LaserJet 4345mfp series

Fax Call Report 1

U.S. EPA (6211MR)
303-312-6953
2013-Jan-17 08:12 AM

Job	Date/Time	Type	Identification	Duration	Pages	Result
1575	2013-Jan-17 08:10 AM	Send	9,14557229145	1:13	0	No answer (0)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 WYNKOOP STREET
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

FACSIMILE TRANSMITTAL SHEET

TO: Les Farnsworth	FROM: Don Breffle
COMPANY: Petroglyph Operating Company	DATE: 01/17/13
FAX NUMBER: 435 722 9145	TOTAL NO. OF PAGES, INCLUDING COVER: 4
PHONE NUMBER:	SENDER'S PHONE NUMBER: 303 312 6186
RE: UIC Permission to Resume Injection	YOUR REFERENCE NUMBER:

URGENT ☒ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 WYNKOOP STREET
DENVER, CO 80202-1129
Phone 800-227-8917
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FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
Les Farnsworth	Don Breffle
COMPANY:	DATE:
Petroglyph Operating Company	01/17/13
FAX NUMBER:	TOTAL NO. OF PAGES, INCLUDING COVER:
435 722 9145	4
PHONE NUMBER:	SENDER'S PHONE NUMBER:
	303 312 6186
RE:	YOUR REFERENCE NUMBER:
UIC Permission to Resume Injection	

URGENT ☒ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

Ref: 8ENF-UFO CONCURRENCE COPY

CERTIFIED MAIL 7009-3410-0000-2599-7655
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: Underground Injection Control (UIC)
Permission to Resume Injection
Ute Tribal 29-14 Well
EPA ID# UT20736-04641
API # 43-013-32201
Antelope Creek Oil Field
Duchesne County, UT

Dear Mr. Farnsworth:

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Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. §300h. Such non-compliance may subject you to formal enforcement by EPA, as codified at 40 C.F.R. Part 22.

8ENF-UFO 1/14/13 JSCHUMER 8ENF-UFO 1/15/13 8ENF-UFO 1/14/13

If you have any questions concerning this letter, you may contact Sarah Roberts at (303) 312-7056. Please direct all correspondence to the attention of Sarah Roberts at Mail Code 8ENF-UFO.

Sincerely,

Darcy O'Connor, Acting Director
UIC/FIFRA/OPA Technical Enforcement Programs

cc: Irene Cuch, Jr., Chairwoman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Ronald Wopsock, Vice-Chairman
Uintah & Ouray Business Committee
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Manuel Myore, Director of Energy,
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P.O. Box 190
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Mike Natchees, Environmental
Coordinator
Ute Indian Tribe
P.O. Box 190
Fort Duchesne, Utah 84026

John Rogers
Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114

bcc: Randy Brown (8P-TA)

Printed on Recycled Paper

OMB No. 2040-0042 Approval Expires 11/30/2014

EPA

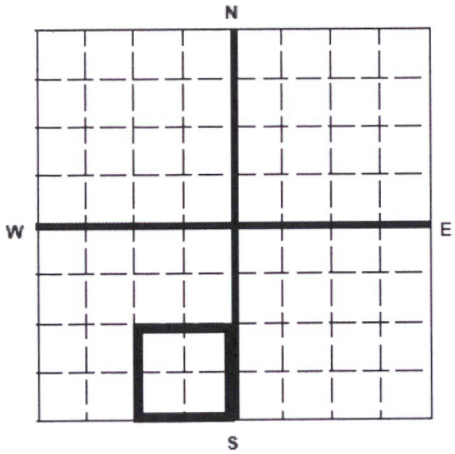
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04641

Surface Location Description
___ 1/4 of ___ 1/4 of SE 1/4 of SW 1/4 of Section 29 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 679 ft. frm (N/S) S Line of quarter section
and 1942 ft. from (E/W) W Line of quarter section.

WELL ACTIVITY
- [ ] Brine Disposal
- [X] Enhanced Recovery
- [ ] Hydrocarbon Storage

TYPE OF PERMIT
- [ ] Individual
- [X] Area

Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE 29-14

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	16	1708	1735	723		0	0
February	16	1800	1830	920		0	0
March	16	1800	1810	910		0	0
April	16	1776	1810	667		0	0
May	16	1798	1819	661		0	0
June	16	1762	1830	757		0	0
July	16	1804	1818	887		0	0
August	16	1778	1804	828		0	0
September	16	1753	1771	712		0	0
October	16	1787	1802	961		0	0
November	16	1717	1765	592		0	0
December	16	1755	1775	953		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		03/21/2017

GREEN BLUE CBI
TAB 2

UIC Entered
Date 4/6/17
Initial BB

EPA Form 7520-11 (Rev. 12-11)

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

multi-chem
A HALLIBURTON SERVICE

Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 29-14 INJ, DUCHESNE**	Lab Tech:	**Kaitlyn Natelli**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2017**		
Sample ID:	**WA-345353**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics

Test Date:	1/25/2017
System Temperature 1 (°F):	300
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	130
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0059
pH:	8.30
Calculated TDS (mg/L):	12390.96
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	15.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	4294.63	Chloride (Cl):	5000.00
Potassium (K):	31.13	Sulfate (SO_4):	50.00
Magnesium (Mg):	9.99	Bicarbonate (HCO_3):	2928.00
Calcium (Ca):	20.15	Carbonate (CO_3):	
Strontium (Sr):	5.93	Hydroxide(HO):	
Barium (Ba):	17.07	Acetic Acid (CH_3COO)	
Iron (Fe):	6.05	Propionic Acid (C_2H_5COO)	
Zinc (Zn):	0.64	Butanoic Acid (C_3H_7COO)	
Lead (Pb):	0.00	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Ammonia NH_3:		Fluoride (F):	
Manganese (Mn):	0.27	Bromine (Br):	
Aluminum (Al):	0.08	Silica (SiO_2):	27.10
Lithium (Li):	2.92	Calcium Carbonate ($CaCO_3$):	
Boron (B):	5.80	Phosphates (PO_4):	7.66
Silicon (Si):	12.67	Oxygen (O_2):	

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	1.27	16.40	1.15	9.25	3.87	3.34	2.94	4.40	0.00	0.00	0.00	0.00	0.00	0.00	10.32	0.33
149.00	267.00	1.32	16.54	1.05	9.03	3.81	3.34	3.03	4.40	0.00	0.00	0.00	0.00	0.00	0.00	10.05	0.33
168.00	483.00	1.39	16.72	0.98	8.82	3.78	3.34	3.12	4.40	0.00	0.00	0.00	0.00	0.00	0.00	9.83	0.33
187.00	700.00	1.48	16.88	0.92	8.64	3.78	3.34	3.21	4.40	0.00	0.00	0.00	0.00	0.00	0.00	9.63	0.33
206.00	917.00	1.57	17.03	0.88	8.49	3.79	3.34	3.30	4.40	0.00	0.00	0.00	0.00	0.00	0.00	9.46	0.33
224.00	1133.00	1.67	17.16	0.85	8.38	3.83	3.34	3.38	4.40	0.00	0.00	0.00	0.00	0.00	0.00	9.32	0.33
243.00	1350.00	1.78	17.27	0.83	8.31	3.88	3.34	3.46	4.40	0.00	0.00	0.00	0.00	0.00	0.00	9.19	0.33
262.00	1567.00	1.89	17.36	0.83	8.28	3.95	3.34	3.53	4.40	0.00	0.00	0.00	0.00	0.00	0.00	9.08	0.33
281.00	1783.00	2.01	17.43	0.83	8.29	4.03	3.34	3.60	4.40	0.00	0.00	0.00	0.00	0.00	0.00	8.99	0.33
300.00	2000.00	2.14	17.48	0.84	8.33	4.12	3.34	3.66	4.40	0.00	0.00	0.00	0.00	0.00	0.00	8.91	0.33

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

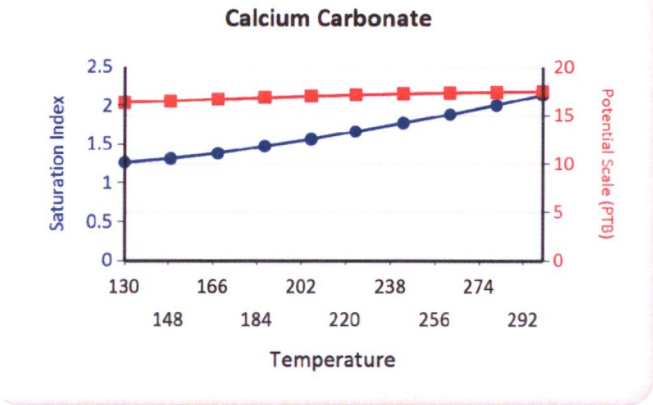
multi-chem®
A HALLIBURTON SERVICE

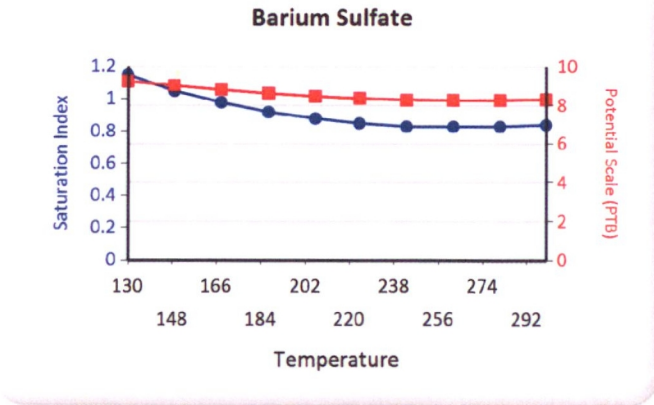
Water Analysis Report

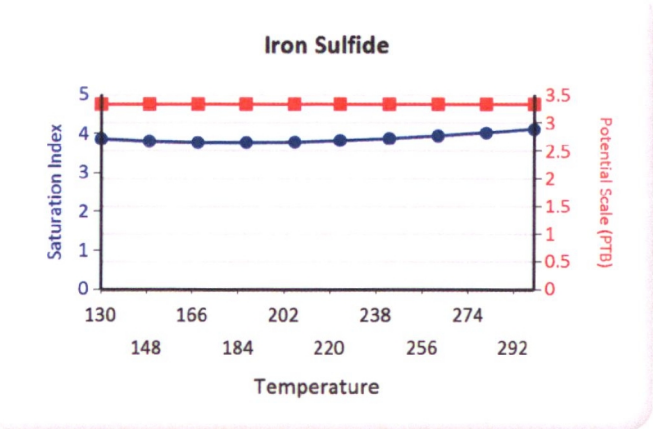
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48	0.42	0.00	0.00	2.57	14.16	1.22	11.67	10.12	4.70
149.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68	0.42	0.00	0.00	3.30	16.28	1.60	14.81	10.56	4.70
168.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87	0.42	0.00	0.00	4.08	17.87	2.04	18.25	11.07	4.70
187.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.05	0.43	0.00	0.00	4.85	18.82	2.47	21.43	11.59	4.70
206.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	2.20	0.43	0.00	0.00	5.61	19.35	2.91	24.23	12.13	4.70
224.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	2.34	0.43	0.00	0.00	6.37	19.64	3.35	26.57	12.67	4.70
243.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	2.47	0.43	0.00	0.00	7.11	19.79	3.78	28.41	13.22	4.70
262.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	2.58	0.43	0.00	0.00	7.83	19.87	4.21	29.73	13.77	4.70
281.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	2.68	0.43	0.00	0.00	8.53	19.91	4.63	30.55	14.31	4.70
300.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	2.76	0.43	0.00	0.00	9.21	19.93	5.04	30.95	14.83	4.70

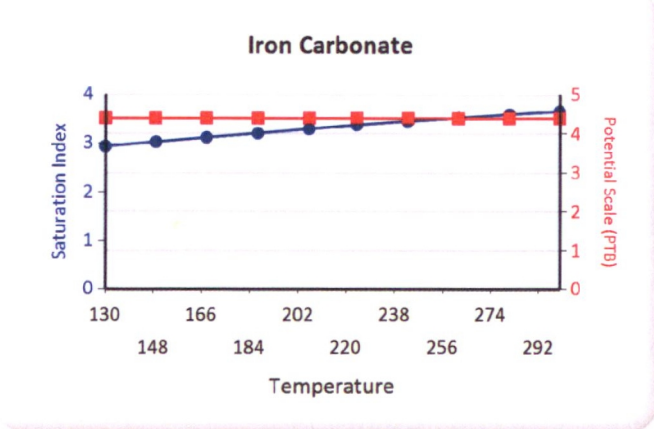
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate









Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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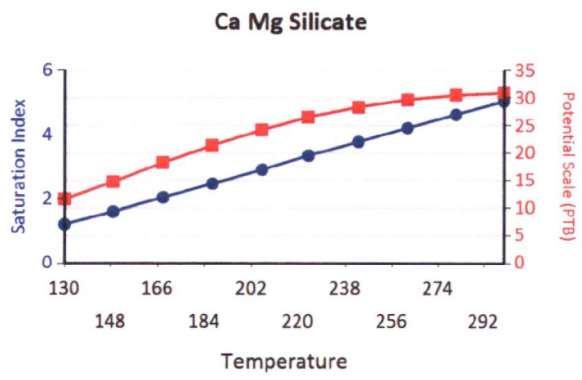
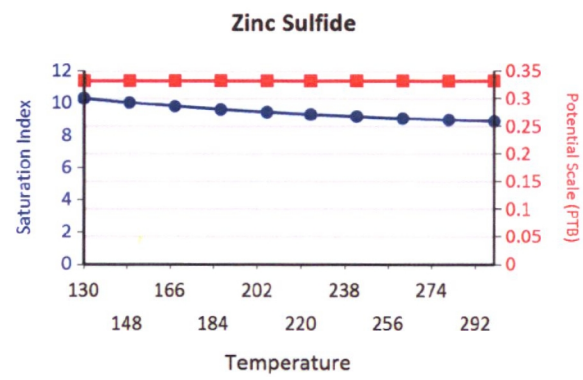
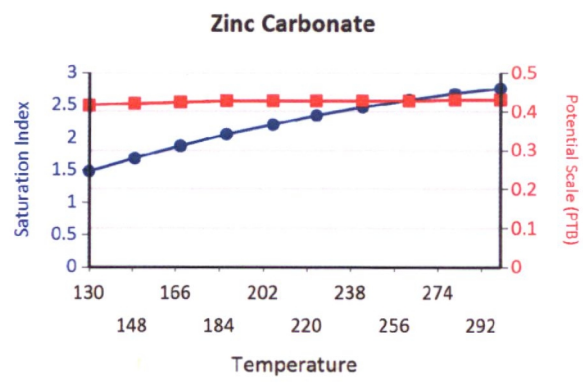
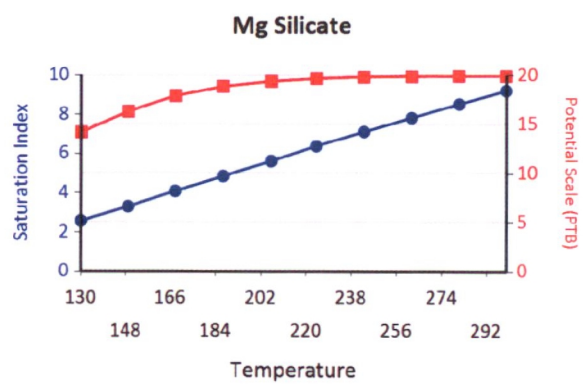
Water Analysis Report









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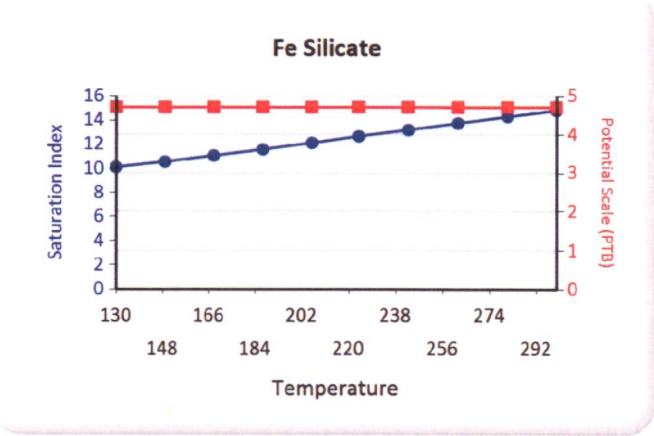
Water Analysis Report



UT20736-04641

Mechanical Integrity Test
Tubing/Casing Annulus Pressure Test

U.S. Environmental Protection Agency
Underground Injection Control Program
1595 Wynkoop Street, Denver, CO 80202

EPA Witness: _____ Date: 08 / 03 / 17
Test conducted by: TROY ZIHRER
Others present: ERIC NORTON

Well Name: UTE TRIBAL 29-14 Type: (ER) SWD **Status:** (AC) TA UC
Field: PETROGLYPH (ANTELOPE CREEK)
Location: SESW Sec: 29 T 5 N / (S) R 3 E / (W) County: DUSCHESNE State: UT
Operator: CRESCENT POINT ENERGY
Last MIT: ____ / ____ / ____ **Maximum Allowable Pressure:** _____ **PSIG**

Regularly scheduled test? [✓] Yes [ ] No
Initial test for permit? [ ] Yes [ ] No
Test after well rework? [ ] Yes [ ] No

Well injecting during test? If Yes, rate: 27 **bpd**
Pre-test annulus pressure: 0 **psig**

MIT DATA TABLE	*Test #1*	*Test #2*	*Test #3*
TUBING		***PRESSURE RECORD***	
Initial Pressure	1710 psig	psig	psig
End of test pressure	1710 psig	psig	psig
CASING / TUBING ANNULUS		***PRESSURE RECORD***	
0 minutes	1,000 psig	psig	psig
5 minutes	1,000 psig	psig	psig
10 minutes	1,000 psig	psig	psig
15 minutes	1,000 psig	psig	psig
20 minutes	1,000 psig	psig	psig
25 minutes	1,000 psig	psig	psig
30 minutes	1,000 psig	psig	psig
_____ *minutes*	~~1,000~~ psig	psig	psig
_____ *minutes*	~~1,000~~ psig	psig	psig
RESULT	[✓] *Pass* [ ]*Fail*	[ ] *Pass* [ ]*Fail*	[ ] *Pass* [ ]*Fail*

Does the annulus pressure build back up after the test ? **If Yes,** _____ **psig.**

GREEN	BLUE	CBI
	2	

U2 Entered
Date 9-13-17
Initial NW

MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

LOAD ANNULUS W/ < 1 BBL TREATED FLUID

Signature of Witness:_____

OFFICE USE ONLY - COMPLIANCE FOLLOWUP

Staff _____ Date: ____/____/

Do you agree with the reported test results? [ ] YES [ ] NO

If not, why?

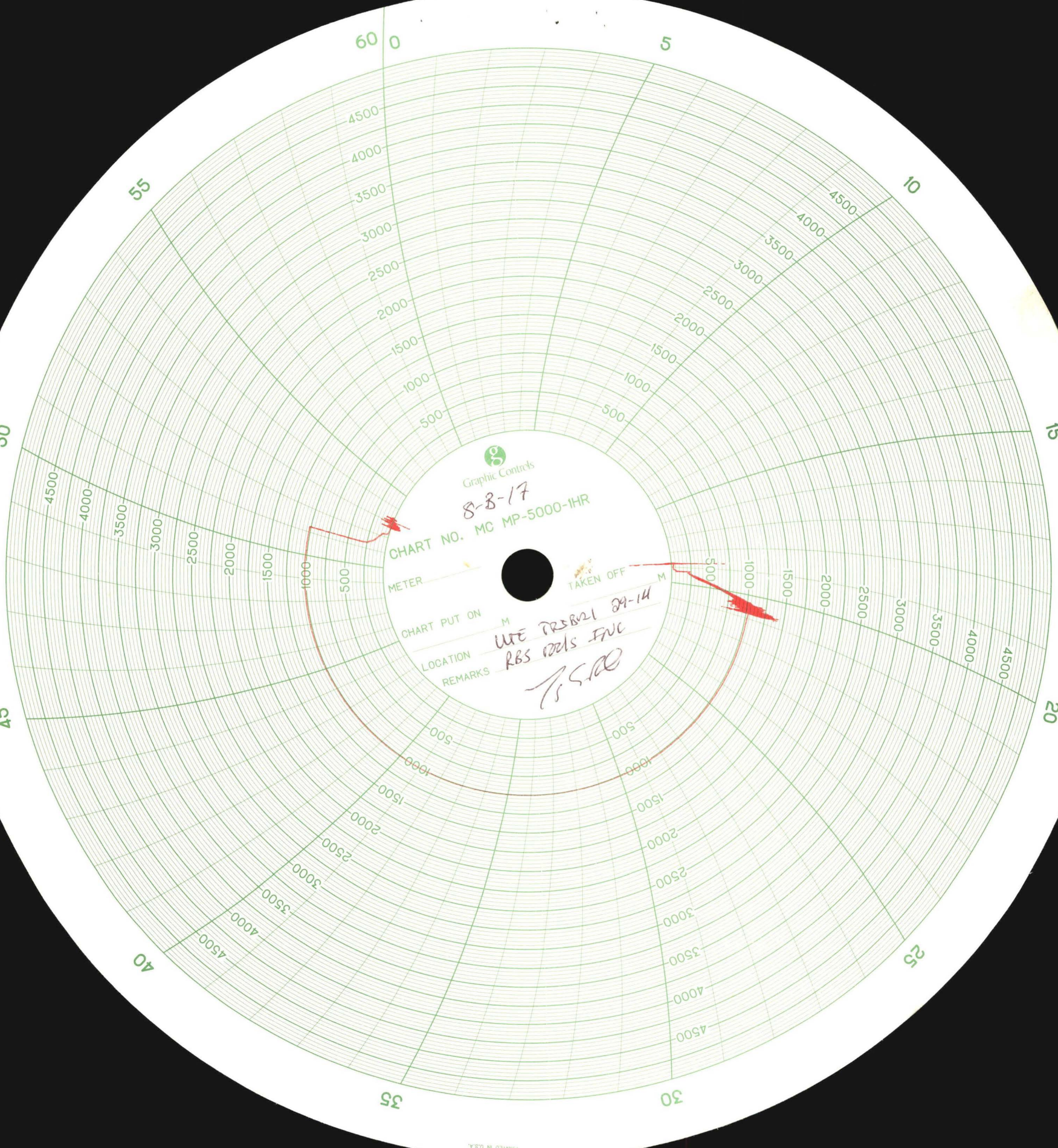
Possible violation identified? [ ] YES [ ] NO

If YES, what

If YES - followup initiated? [ ] YES

[ ] NO - why not?

[ ] Data Entry [ ] Compliance Staff [ ] 2nd Data Entry [ ] Hardcopy Filing


Graphic Controls
8-8-17
CHART NO. MC MP-5000-1HR
METER
TAKEN OFF
M
CHART PUT ON
M
LOCATION
UTE TR3B21 24-14
REMARKS
RBS 1021S FNC
PRINTED IN U.S.A.

main / 720.880.3610
fax / 303.292.1562
toll free / 1.888.693.0020

Crescent Point

555 17th Street, Suite 1800
Denver, Colorado
USA 80202

RECEIVED
AUG 21 2017
Office of Enforcement, Compliance
and Environmental Justice (Water)

To Nathan Wiser or Whom It May Concern,

Please find completed Mechanical Integrity Tests and R8 forms for wells that are part of the Antelope Creek field. All tests passed pressure testing with greater than 200 psi differential across tubing/casing with the exception of the Ute Tribal 13-10D which lost ~150 psi over the 30 minute test. Crescent Point has flagged this well as a priority issue and will be sending a workover rig to identify and repair the failure within the next 30 days.

With Regards,

Aaron Miller
Operations Engineer

86 North 1500 East
Ballard City, UT 84066
p. 435.722.0025
c. 435.823.0668

Crescent Point

OMB No. 2040-0042 Approval Expires 11/30/2014

EPA

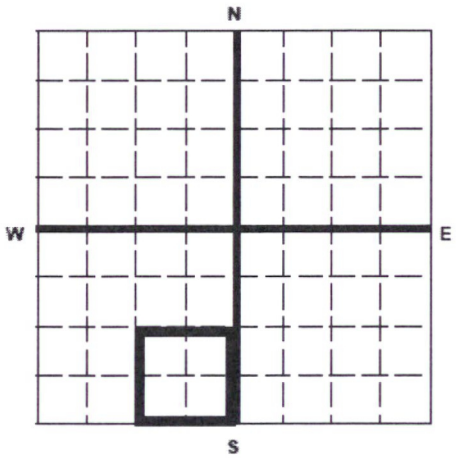
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-~~04494~~ 04641

Surface Location Description
___ 1/4 of ___ 1/4 of SE 1/4 of SW 1/4 of Section 29 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 679 ft. frm (N/S) S Line of quarter section
and 1942 ft. from (E/W) W Line of quarter section.

U2 Entered
Date 3/3/16
Initial BJ

WELL ACTIVITY
- [ ] Brine Disposal
- [X] Enhanced Recovery
- [ ] Hydrocarbon Storage

TYPE OF PERMIT
- [ ] Individual
- [X] Area

Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE 29-14

MONTH	YEAR	INJECTION PRESSURE AVERAGE PSIG	INJECTION PRESSURE MAXIMUM PSIG	TOTAL VOLUME INJECTED BBL	TOTAL VOLUME INJECTED MCF	TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MINIMUM PSIG	TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MAXIMUM PSIG
January	15	1726	1747	739		0	0
February	15	1759	1807	855		0	0
March	15	1792	1827	1014		0	0
April	15	1784	1829	991		0	0
May	15	1799	1817	884		0	0
June	15	1805	1834	937		0	0
July	15	1828	1833	980		0	0
August	15	1801	1811	886		0	0
September	15	1775	1802	757		0	0
October	15	1767	1767	845		0	0
November	15	1755	1778	734		0	0
December	15	1724	1749	753		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		02/08/2016

GREEN BLUE CBI
TAB 2

EPA Form 7520-11 (Rev. 12-11)

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 29-14 INJ, DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2016**		
Sample ID:	**WA-327705**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics

Test Date:	1/15/2016
System Temperature 1 (°F):	60
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	180
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0112
pH:	8.50
Calculated TDS (mg/L):	20233.95
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	15.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	7369.96	Chloride (Cl):	10000.00
Potassium (K):	26.54	Sulfate (SO_4):	260.00
Magnesium (Mg):	28.25	Bicarbonate (HCO_3):	2440.00
Calcium (Ca):	70.10	Carbonate (CO_3):	
Strontium (Sr):	5.84	Acetic Acid (CH_3COO)	
Barium (Ba):	3.40	Propionic Acid (C_2H_5COO)	
Iron (Fe):	3.25	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	2.71	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.43	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.07	Silica (SiO_2):	23.40
Aluminum (Al):	0.01	Calcium Carbonate ($CaCO_3$):	
Lithium (Li):	1.75	Phosphates (PO_4):	7.83
Boron (B):	3.66	Oxygen (O_2):	
Silicon (Si):	10.94		

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	1.98	59.81	0.75	1.66	3.48	1.79	2.78	2.36	0.00	0.00	0.00	0.00	0.00	0.00	10.36	1.42
167.00	267.00	1.91	59.41	0.77	1.68	3.48	1.79	2.70	2.36	0.00	0.00	0.00	0.00	0.00	0.00	10.49	1.42
153.00	483.00	1.85	59.06	0.80	1.70	3.49	1.79	2.61	2.36	0.00	0.00	0.00	0.00	0.00	0.00	10.64	1.42
140.00	700.00	1.79	58.68	0.85	1.74	3.52	1.79	2.53	2.36	0.00	0.00	0.00	0.00	0.00	0.00	10.81	1.42
127.00	917.00	1.74	58.27	0.90	1.77	3.56	1.79	2.45	2.36	0.00	0.00	0.00	0.00	0.00	0.00	11.00	1.42
113.00	1133.00	1.69	57.84	0.97	1.81	3.61	1.79	2.37	2.35	0.00	0.00	0.00	0.00	0.00	0.00	11.20	1.42
100.00	1350.00	1.65	57.40	1.04	1.84	3.68	1.79	2.28	2.35	0.00	0.00	0.00	0.00	0.00	0.00	11.42	1.42
87.00	1567.00	1.60	56.96	1.14	1.88	3.76	1.79	2.20	2.35	0.00	0.00	0.00	0.00	0.00	0.00	11.65	1.42
73.00	1783.00	1.57	56.52	1.24	1.91	3.86	1.79	2.11	2.34	0.00	0.00	0.00	0.00	0.00	0.00	11.91	1.42
60.00	2000.00	1.53	56.10	1.37	1.94	3.98	1.79	2.02	2.34	0.00	0.00	0.00	0.00	0.00	0.00	12.19	1.42

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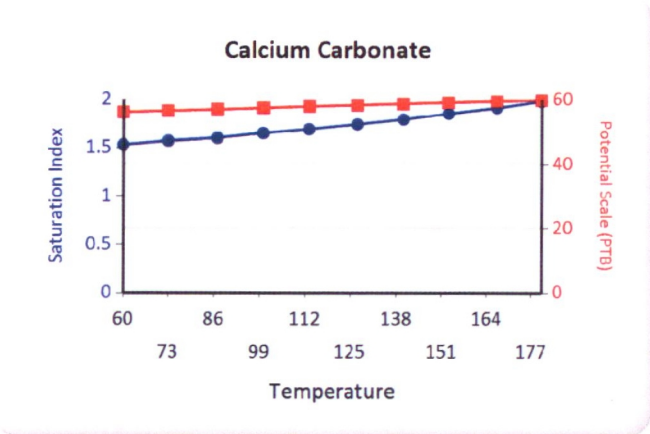
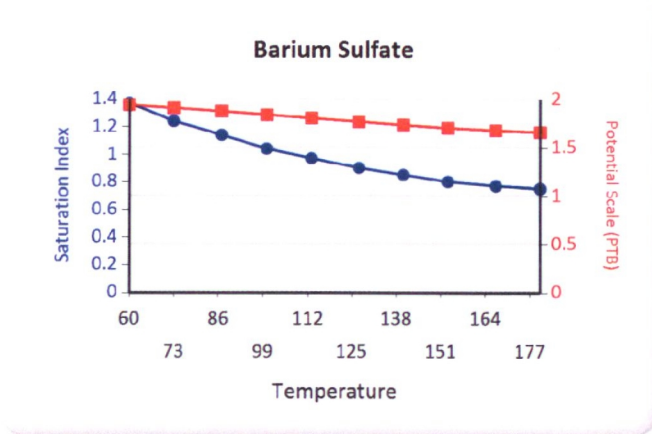
Water Analysis Report

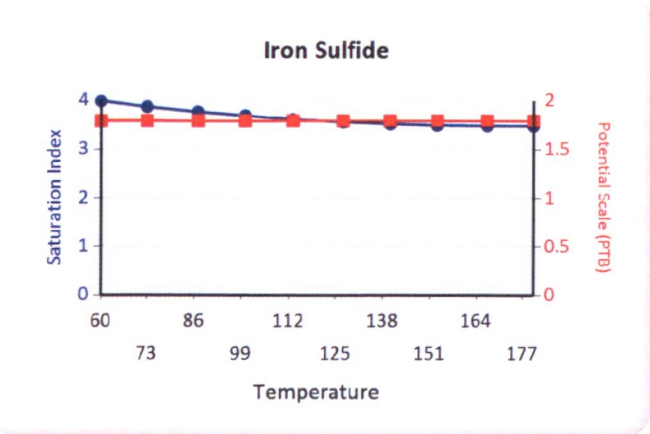
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.53	1.82	10.84	0.18	6.65	49.70	3.76	29.65	10.96	2.53
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.39	1.82	11.07	0.18	6.06	46.78	3.41	28.51	10.54	2.53
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.25	1.81	11.34	0.18	5.51	44.06	3.10	27.28	10.18	2.53
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.10	1.81	11.63	0.18	4.95	41.00	2.79	25.75	9.81	2.53
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	1.95	1.80	11.94	0.18	4.39	37.63	2.48	23.94	9.45	2.53
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77	1.79	12.28	0.18	3.82	33.96	2.16	21.86	9.10	2.52
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59	1.77	12.64	0.18	3.25	29.99	1.85	19.54	8.74	2.52
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	1.40	1.75	13.04	0.18	2.67	25.68	1.54	16.98	8.40	2.52
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19	1.70	13.47	0.18	2.08	20.97	1.22	14.16	8.05	2.52
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	1.62	13.93	0.18	1.47	15.75	0.90	11.06	7.70	2.52

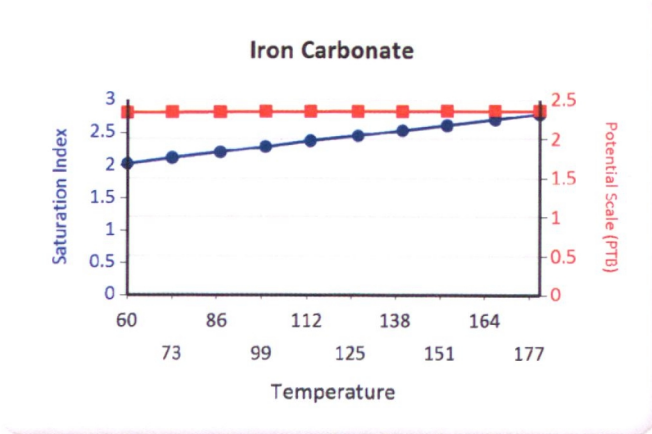
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

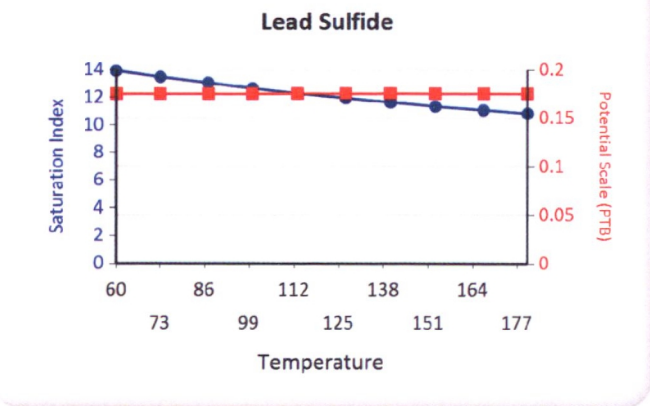
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

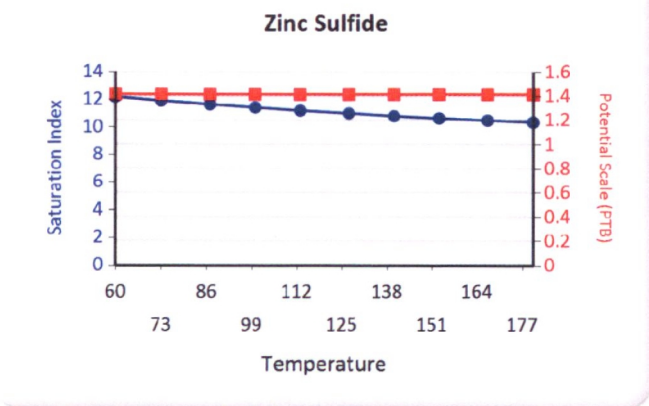


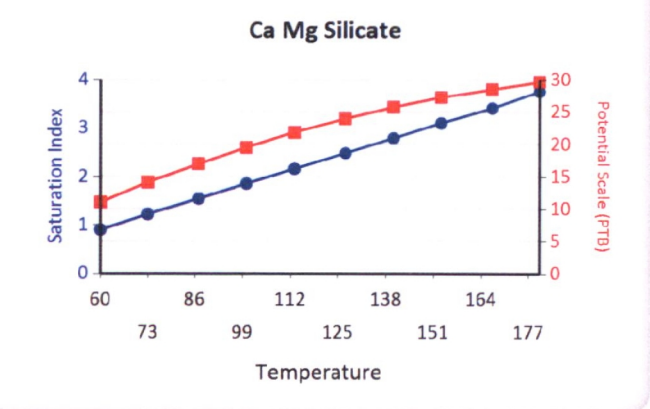


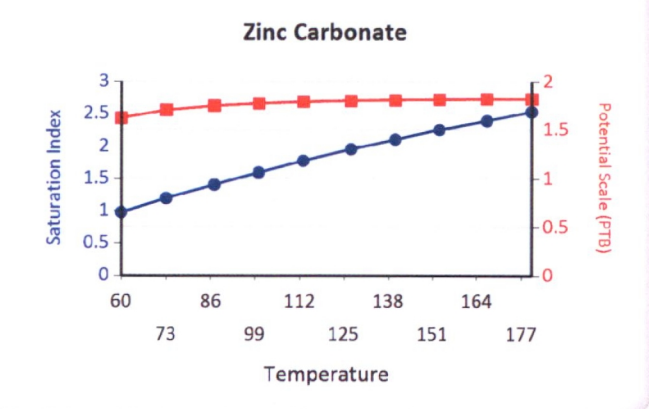


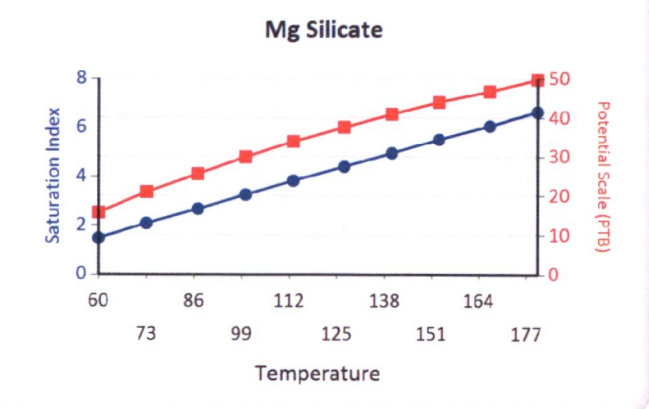


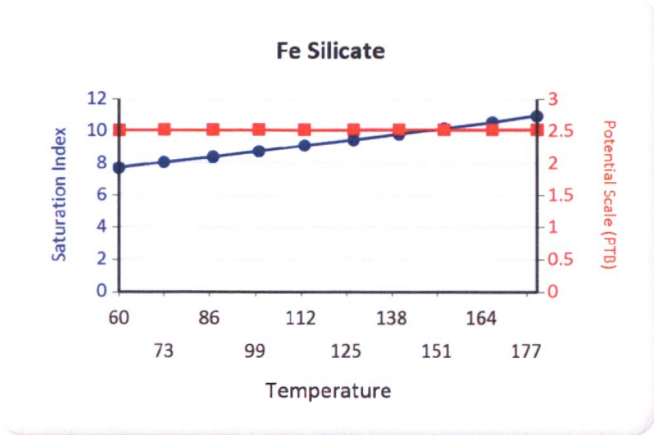

Lead Sulfide
Saturation Index
Potential Scale (PTB)
Temperature
60 86 112 138 164
73 99 125 151 177


Zinc Sulfide
Saturation Index
Potential Scale (PTB)
Temperature
60 86 112 138 164
73 99 125 151 177


Ca Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
60 86 112 138 164
73 99 125 151 177


Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
60 86 112 138 164
73 99 125 151 177


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
60 86 112 138 164
73 99 125 151 177


Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
12
10
8
6
4
2
0
3
2.5
2
1.5
1
0.5
0
60
86
112
138
164
73
99
125
151
177

OMB No. 2040-0042 Approval Expires 12/31/2011

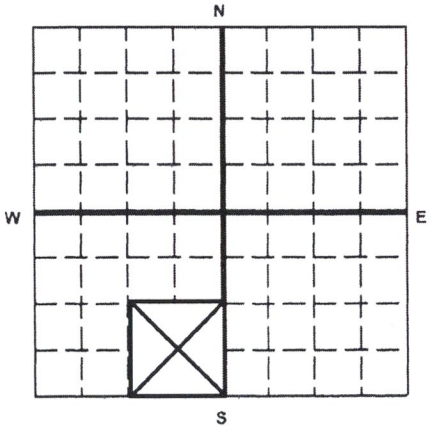
EPA

United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee	Name and Address of Surface Owner
Petroglyph Operating Company, Inc. 2258 P.O. Box 7608 Boise, Idaho 83709	Ute Indian Tribe P.O. Box 70 Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04641

Surface Location Description

____ 1/4 of ____ 1/4 of SE 1/4 of SW 1/4 of Section 29 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 679 ft. frm (N/S) S Line of quarter section and 1942 ft. from (E/W) W Line of quarter section.

WELL ACTIVITY
- [ ] Brine Disposal
- [X] Enhanced Recovery
- [ ] Hydrocarbon Storage

TYPE OF PERMIT
- [ ] Individual
- [X] Area

Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE 29-14

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	14	1811	1830	861		0	0
February	14	1835	1841	795		0	0
March	14	1798	1806	654		0	0
April	14	1838	1847	862		0	0
May	14	1757	1805	699		0	0
June	14	1822	1847	860		0	0
July	14	1732	1828	622		0	0
August	14	1796	1820	846		0	0
September	14	1445	1711	536		0	0
October	14	1728	1783	1084		0	0
November	14	1777	1798	973		0	0
December	14	1796	1836	1031		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		2/10/2015

EPA Form 7520-11 (Rev. 12-08)

U2 Entered
Date 3/31/15
Initial bw

TAB	GREEN	BLUE	CBI
		2	

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 29-14 INJ, DUCHESNE**	Lab Tech:	**Gary Winegar**
Sample Point:	**WELLHEAD**		
Sample Date:	**1/7/2015**		
Sample ID:	**WA-297523**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	1/14/2015
System Temperature 1 (°F):	160
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	80
System Pressure 2 (psig):	15
Calculated Density (g/ml):	1.0052
pH:	8.50
Calculated TDS (mg/L):	12275.31
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	20.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	3241.02	Chloride (Cl):	6000.00
Potassium (K):	47.38	Sulfate (SO_4):	216.00
Magnesium (Mg):	12.71	Bicarbonate (HCO_3):	2684.00
Calcium (Ca):	25.80	Carbonate (CO_3):	
Strontium (Sr):	5.50	Acetic Acid (CH_3COO)	
Barium (Ba):	8.35	Propionic Acid (C_2H_5COO)	
Iron (Fe):	4.51	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	2.51	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.00	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.14	Silica (SiO_2):	27.39

Notes:
B=7.04 Al=.06 Li=1.52

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	1.51	21.64	1.86	4.90	4.34	2.49	2.67	3.27	0.00	0.00	0.00	0.00	0.00	0.00	12.11	1.31
88.00	157.00	1.52	21.63	1.77	4.89	4.25	2.49	2.71	3.27	0.00	0.00	0.00	0.00	0.00	0.00	11.93	1.31
97.00	300.00	1.53	21.66	1.70	4.87	4.19	2.49	2.75	3.27	0.00	0.00	0.00	0.00	0.00	0.00	11.76	1.31
106.00	443.00	1.54	21.70	1.62	4.85	4.14	2.49	2.79	3.27	0.00	0.00	0.00	0.00	0.00	0.00	11.60	1.31
115.00	585.00	1.56	21.73	1.56	4.83	4.09	2.49	2.83	3.27	0.00	0.00	0.00	0.00	0.00	0.00	11.45	1.31
124.00	728.00	1.58	21.77	1.50	4.81	4.05	2.49	2.87	3.27	0.00	0.00	0.00	0.00	0.00	0.00	11.31	1.31
133.00	871.00	1.60	21.81	1.45	4.79	4.02	2.49	2.91	3.28	0.00	0.00	0.00	0.00	0.00	0.00	11.19	1.31
142.00	1014.00	1.62	21.85	1.40	4.77	3.99	2.49	2.95	3.28	0.00	0.00	0.00	0.00	0.00	0.00	11.06	1.31
151.00	1157.00	1.64	21.89	1.35	4.75	3.97	2.49	2.99	3.28	0.00	0.00	0.00	0.00	0.00	0.00	10.95	1.31
160.00	1300.00	1.67	21.93	1.31	4.73	3.96	2.49	3.02	3.28	0.00	0.00	0.00	0.00	0.00	0.00	10.84	1.31

		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	1.60	1.64	0.00	0.00	1.45	10.39	0.59	5.37	9.00	3.51
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.71	1.65	0.00	0.00	1.75	11.93	0.73	6.37	9.13	3.51
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.83	1.66	0.00	0.00	2.11	13.75	0.92	7.63	9.32	3.51
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94	1.67	0.00	0.00	2.47	15.44	1.11	8.84	9.53	3.51
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	2.05	1.67	0.00	0.00	2.84	16.98	1.30	9.98	9.74	3.51
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	2.15	1.68	0.00	0.00	3.21	18.37	1.50	11.04	9.96	3.51
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	2.25	1.68	0.00	0.00	3.58	19.60	1.70	12.02	10.18	3.51
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	2.35	1.68	0.00	0.00	3.95	20.69	1.90	12.89	10.42	3.51
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	2.44	1.68	0.00	0.00	4.33	21.62	2.11	13.67	10.66	3.51
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	2.52	1.68	0.00	0.00	4.70	22.40	2.32	14.35	10.90	3.51

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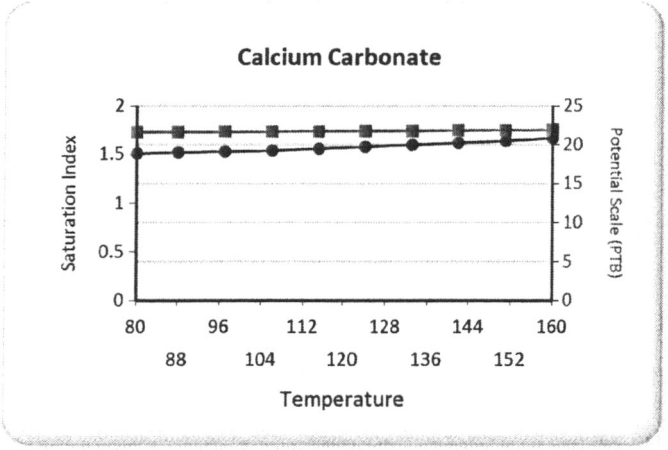
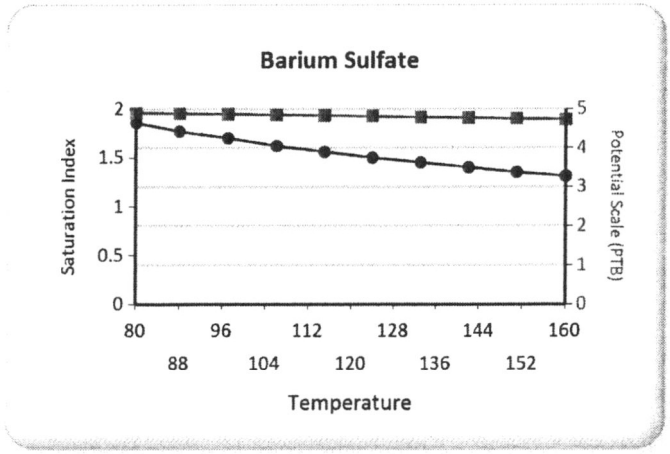
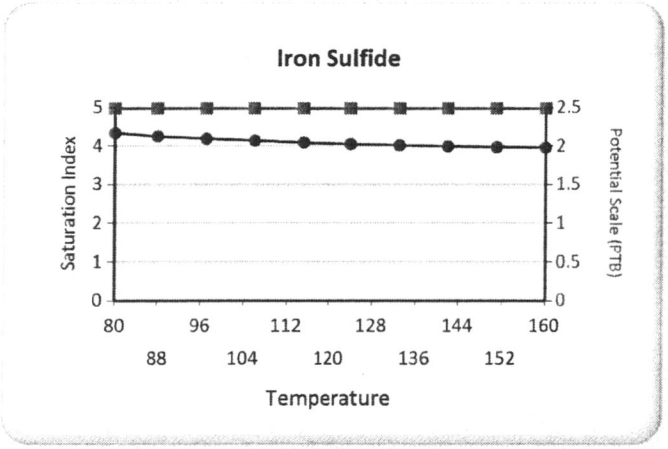
Water Analysis Report

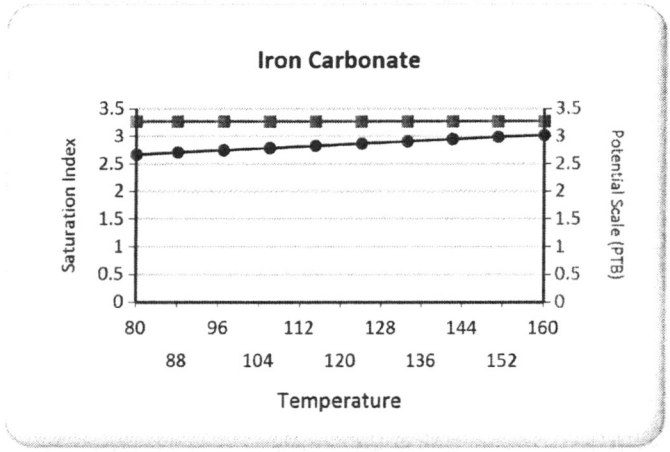
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

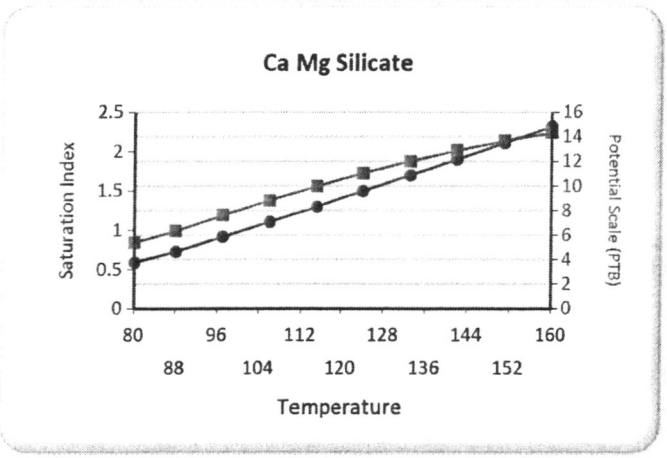
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

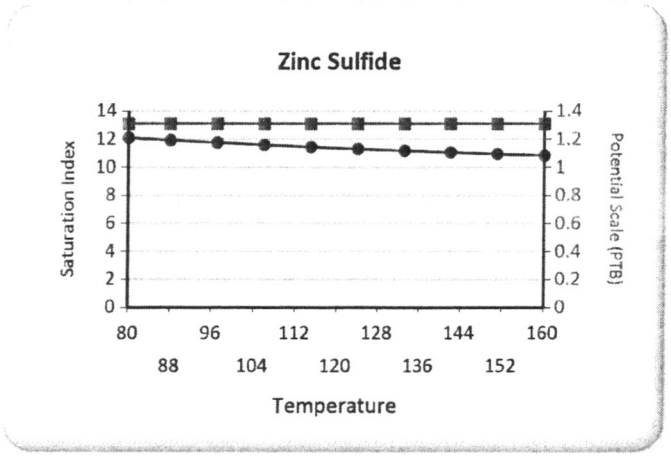


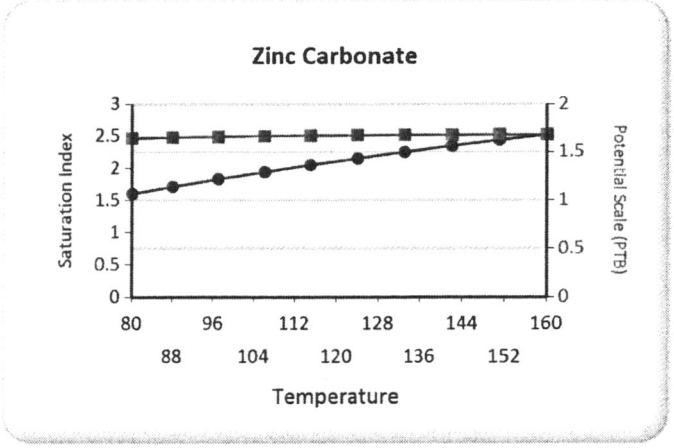


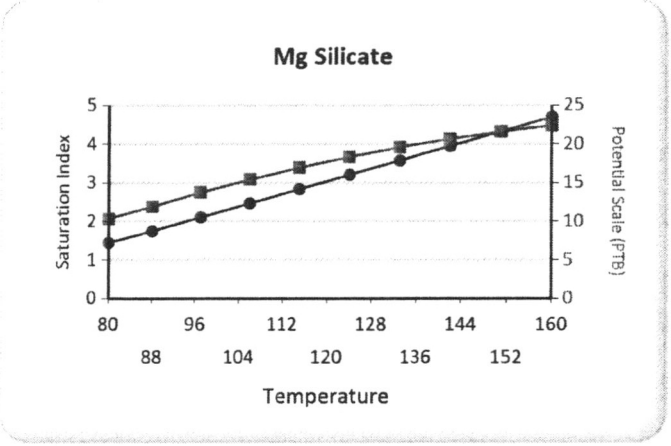


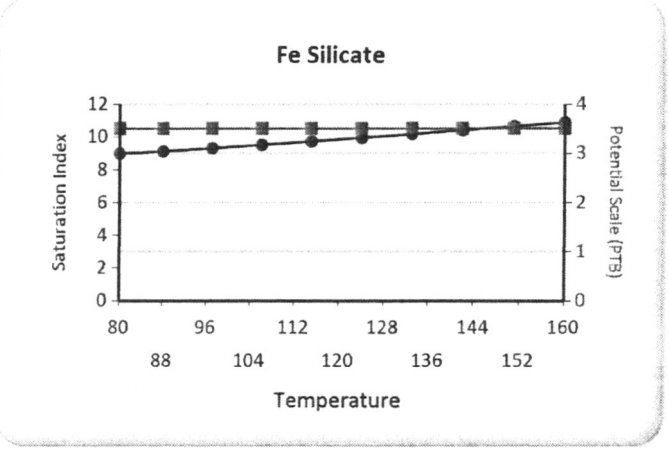







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
3
2.5
2
1.5
1
0.5
0
2
1.5
1
0.5
0
80
96
112
128
144
160
88
104
120
136
152


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
5
4
3
2
1
0
25
20
15
10
5
0
80
96
112
128
144
160
88
104
120
136
152


Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
12
10
8
6
4
2
0
4
3
2
1
0
80
96
112
128
144
160
88
104
120
136
152

OMB No. 2040-0042 Approval Expires 12/31/2011

EPA

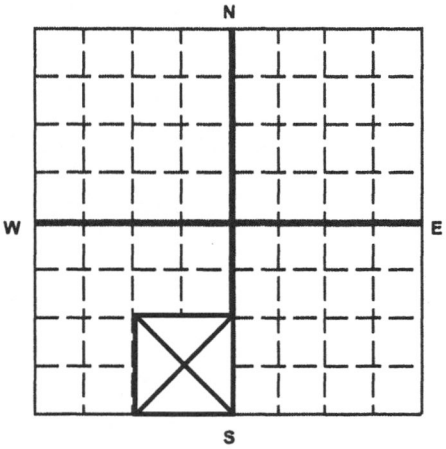
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04641

Surface Location Description
___ 1/4 of ___ 1/4 of SE 1/4 of SW 1/4 of Section 29 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 679 ft. frm (N/S) S Line of quarter section
and 1942 ft. from (E/W) W Line of quarter section.

WELL ACTIVITY
- [ ] Brine Disposal
- [x] Enhanced Recovery
- [ ] Hydrocarbon Storage

TYPE OF PERMIT
- [ ] Individual
- [x] Area

Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE 29-14

MONTH	YEAR	INJECTION PRESSURE AVERAGE PSIG	INJECTION PRESSURE MAXIMUM PSIG	TOTAL VOLUME INJECTED BBL	TOTAL VOLUME INJECTED MCF	TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MINIMUM PSIG	TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MAXIMUM PSIG
January	13	1426	1604	404		0	0
February	13	1716	1792	898		0	0
March	13	1743	1762	659		0	0
April	13	1799	1824	1007		0	0
May	13	1847	1862	1107		0	0
June	13	1835	1851	815		0	0
July	13	1806	1829	731		0	0
August	13	1826	1860	932		0	0
September	13	1838	1871	787		0	0
October	13	1813	1824	707		0	0
November	13	1827	1836	927		0	0
December	13	1804	1828	730		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		2/11/2014

EPA Form 7520-11 (Rev. 12-08)

TAB	GREEN	BLUE	CBI
		2	

U2 Entered
Date 3/21/14
Initial DB

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Units of Measurement: **Standard**

Water Analysis Report

Production Company: **PETROGLYPH ENERGY INC**
Well Name: **UTE TRIBAL 29-14 INJ**
Sample Point: **Wellhead**
Sample Date: **1/8/2014**
Sample ID: **WA-262988**

Sales Rep: **James Patry**
Lab Tech: **Gary Winegar**

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	1/15/2014
System Temperature 1 (°F):	180
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	60
System Pressure 2 (psig):	15
Calculated Density (g/ml):	1.007
pH:	8.50
Calculated TDS (mg/L):	14508.27
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	0.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	5028.43	Chloride (Cl):	6000.00
Potassium (K):	83.00	Sulfate (SO_4):	140.00
Magnesium (Mg):	14.00	Bicarbonate (HCO_3):	3172.00
Calcium (Ca):	39.00	Carbonate (CO_3):	
Strontium (Sr):	5.30	Acetic Acid (CH_3COO)	
Barium (Ba):	1.40	Propionic Acid (C_2H_5COO)	
Iron (Fe):	0.61	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.67	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.08	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.24	Silica (SiO_2):	23.54

Notes:
B=6.2 Al=0 Li=1.2

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum $CaSO_4 \cdot 2H_2O$		Celestite $SrSO_4$		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	1.66	32.98	1.00	0.75	0.00	0.00	1.71	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	157.00	1.67	32.99	0.85	0.72	0.00	0.00	1.78	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86.00	300.00	1.68	33.05	0.72	0.68	0.00	0.00	1.85	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	443.00	1.71	33.11	0.61	0.63	0.00	0.00	1.91	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	585.00	1.73	33.17	0.51	0.58	0.00	0.00	1.98	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126.00	728.00	1.76	33.25	0.43	0.52	0.00	0.00	2.04	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	871.00	1.80	33.32	0.35	0.46	0.00	0.00	2.10	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	1014.00	1.84	33.40	0.29	0.40	0.00	0.00	2.16	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166.00	1157.00	1.88	33.47	0.24	0.35	0.00	0.00	2.22	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1300.00	1.93	33.55	0.19	0.29	0.00	0.00	2.28	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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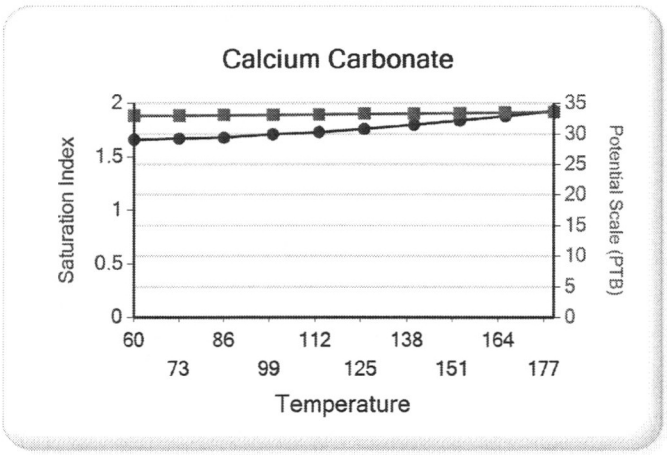
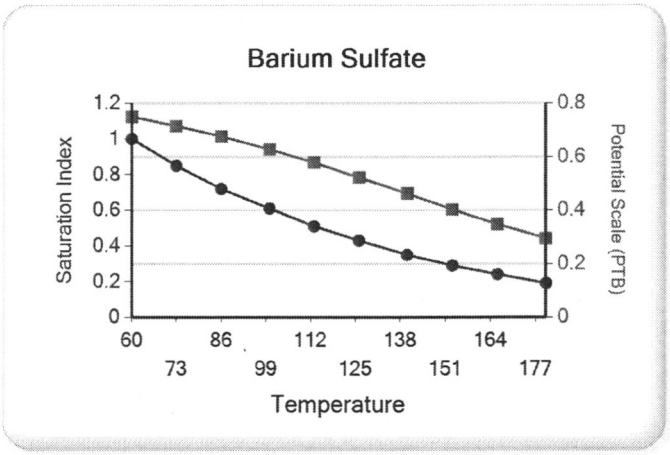
Water Analysis Report

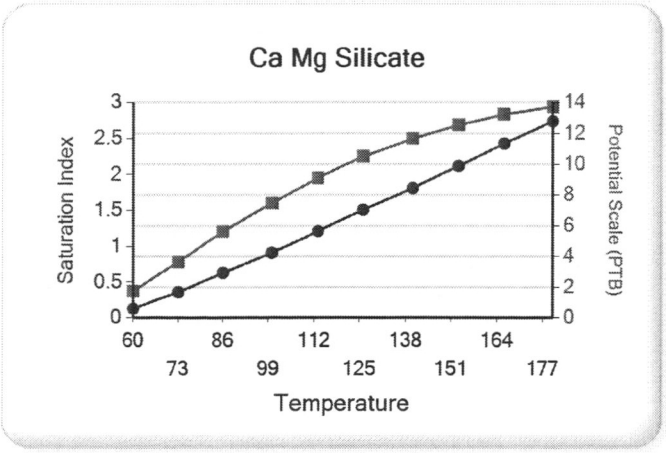
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.36	0.00	0.00	0.43	3.96	0.13	1.74	5.75	0.47
73.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.39	0.00	0.00	0.91	7.39	0.36	3.65	5.96	0.47
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	0.41	0.00	0.00	1.43	10.80	0.63	5.65	6.23	0.47
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.43	0.00	0.00	1.98	13.86	0.91	7.49	6.52	0.47
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44	0.43	0.00	0.00	2.53	16.54	1.21	9.11	6.84	0.47
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	1.60	0.44	0.00	0.00	3.08	18.84	1.51	10.50	7.17	0.47
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74	0.44	0.00	0.00	3.64	20.78	1.81	11.64	7.52	0.47
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	1.88	0.45	0.00	0.00	4.20	22.38	2.12	12.54	7.88	0.47
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01	0.45	0.00	0.00	4.76	23.67	2.43	13.22	8.24	0.47
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	2.12	0.45	0.00	0.00	5.31	24.70	2.74	13.72	8.62	0.47

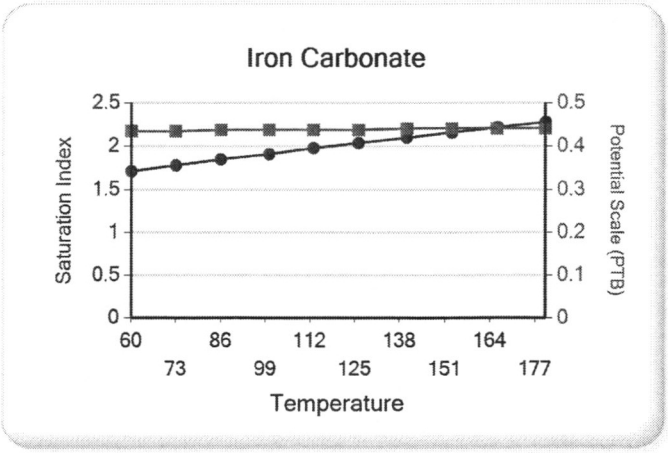
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

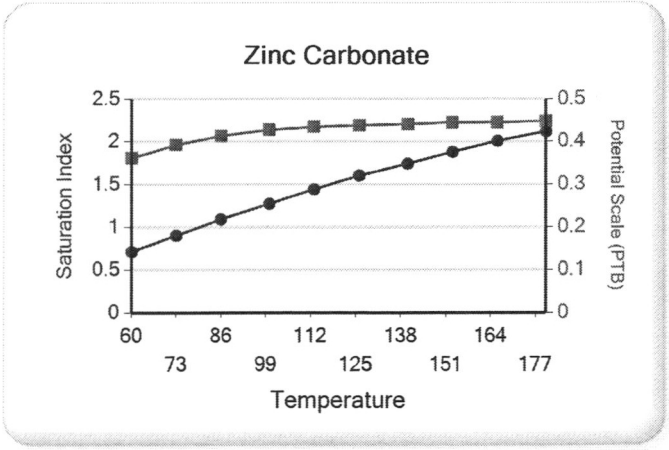
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate







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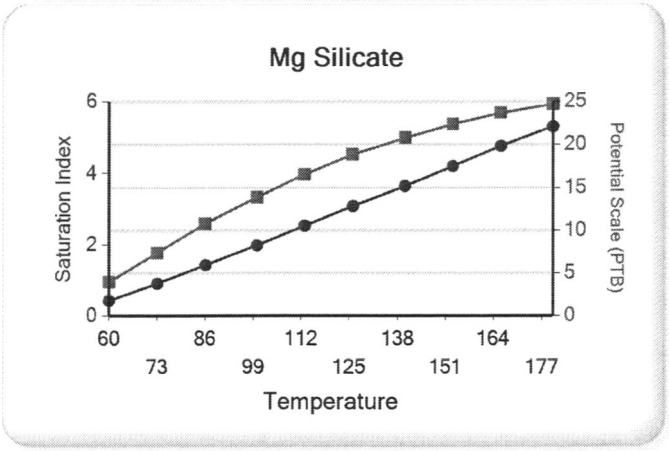
99
125
151
177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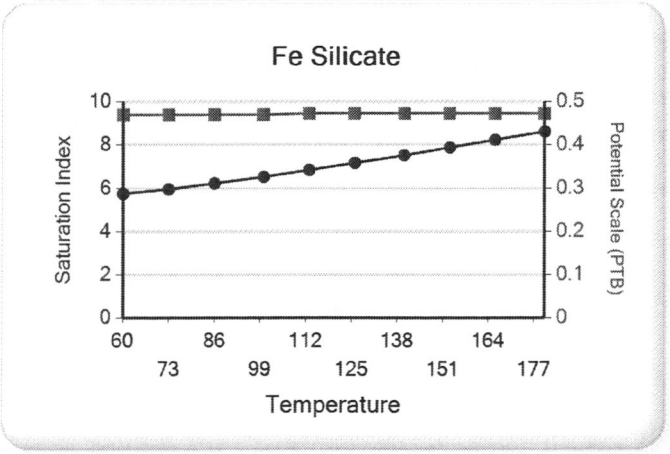
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151
177

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
http://www.epa.gov/region08

AUG 20 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Additional Well to Area Permit**
Antelope Creek Waterflood
EPA Area Permit No. UT2736-00000
Duchesne County, Utah

Dear Mr. Safford:

Your request of June 6, 2001, that the following production well be converted to a Class II enhanced oil recovery well and added to the Antelope Creek Waterflood, as authorized under EPA Area Permit No. UT2736-00000, is hereby granted.

NAME	LOCATION	EPA WELL PERMIT NO.
Ute Tribal #29-14	SE SW Section 29 T 5 S - R 3 W Duchesne County, UT	UT2736-04641

This additional well is within the boundary of the existing Area Permit for the Antelope Creek Waterflood (UT2736-00000), and this addition is made according to the terms and conditions of that Permit. Unless specifically mentioned in this authorization, conversion is being made under the provisions of 40 CFR §144.33 and the terms and conditions of the original Permit. The proposed well location, well schematic, conversion procedures with/schematic, plugging and abandonment plan with/schematic, and Cement Bond Log (CBL), submitted by your office, have been reviewed and approved as follows:

(1) The **conversion** plan for this production well has been reviewed, and found satisfactory. EPA analysis of the CBL for this well **has not identified** a minimum interval of adequate cement within the **confining zone** (3,850' to

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3,964'), pursuant to Region 8 Ground Water Section Guidance No. 34. Therefore, it <u>has not</u> been determined that cement in this well provides an effective barrier to upward movement of fluids through vertical channels adjacent to the wellbore (Part II Mechanical Integrity [MI] pursuant to 40 CFR § 146.8 (2). The **permittee is then required to demonstrate Part II MI, pursuant to standards of Region 8 GROUND WATER SECTION GUIDANCE NO. 37 Demonstrating Part II (external) Mechanical Integrity for a Class II injection well permit.**

(2) **Maximum injection pressure (MIP)** - please reference the Final Area Permit UT2736-00000, Part II. Section C.5.(b) "the maximum surface injection pressure (MIP) shall not exceed **1900 psig". Until such time that a step-rate injectivity test (SRT) has been performed and approved by the EPA, the initial maximum surface injection pressure (MIP) for the Ute Tribal #29-14 shall not exceed <u>1900 psig</u>.**

Final Area Permit (UT2736-00000), has provisions whereby the permittee may request an increase, or decrease, in the maximum surface injection pressure.

(3) The **plugging and abandonment plan and schematic,** submitted by the permittee has been reviewed, and approved w/changes by the EPA. The permittee shall add a 100 foot cement plug across the base of USDWs, 1,200 feet to 1,300 feet.

Underground Sources of Drinking Water (USDWs). The base of the USDWs in the Ute Tribal #29-14 is approximately 1,253 feet below ground level and is located within the Uinta Formation. The source for this USDW information is formation water analyses submitted by the operator for twenty-two (22) wells within the initial AOR, and from Publication No. 92 (1987), prepared jointly by the USGS and the Utah Division of Oil, Gas, and Mining.

Injection Interval: Fluid injection shall be limited to the gross zones within the Green River Formation between the approximate depths of 3,964 feet (Top of "B" Marker) and 5,507 feet (Basal Carbonate Zone). The injection (perforated) zones within this portion of the Green River Formation, are comprised of porous and permeable lenticular calcareous sandstones interbedded with low permeability carbonates and calcareous shales. The lenticular sandstones vary in thickness from 1 to 30 feet and are individually separated by shale which act as isolation barriers (confining zones) for the waterflood.

Confining Zone: The overall confining zone above the top injection interval (4,005'), is identified in this well from 3,964' ("B" marker) to 3,850', and is overlain by impermeable Upper Green River Formation calcareous sandy lacustrine shales and continuous beds of microcrystalline dolomite.

Prior to commencing injection into this well, permittee shall fulfill Permit condition PART II, C. 2. and have submitted to the EPA for review and approval, the following:

(1) All conversion is complete and the permittee has submitted a completed **Well Rework Record (EPA Form 7520-12)**; and

(2) a **pore pressure survey** has been determined of the injection zones; **and**

(3) the Permittee has submitted for review and approval **Part I (Internal) and Part II (External) of the mechanical integrity test (MIT)**; EPA form enclosed with current MIT Guidance No. 37.

Please be aware that Petroglyph does not have authorization to begin injection into the Ute Tribal #29-14 until the items listed above have been approved by the EPA and Petroglyph has received written authorization to begin injection from the EPA.

All other provisions and conditions of the Permit remain as originally issued July 12, 1994, and revised April 30, 1998.

If you have any questions, please contact Mr. Dan Jackson at 303.312.6155. Also, please direct the above requirements to the Ground Water Program Director at the above letterhead address, citing **MAIL CODE 8P-W-GW.** Thank you for your continued cooperation.

Sincerely,

Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

Enclosure: Mechnical Integrity Test Form (MIT)
Current MIT Guidance No. 37

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Committee
Ute Indian Tribe

Ms. Elaine Willie, Environmental Coordinator
Ute Indian Tribe

Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
BLM - Vernal District Office

Mr. Gilbert Hunt
State of Utah Natural Resources
Utah Division of Oil, Gas & Mining

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to: 8/20/01 CW 4143C AUG 20 2001

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Co., Inc.
P.O. Box 607
Roosevelt, UT 84066

UTE TRIBAL #29-14
(UT2736-04641)

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery 8-23-01

C. Signature X ☐ Agent ☒ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

(rec'd 26)
AUG 27 2001

3. Service Type
XX Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Copy from service label) 7001 0320 0005 9387 1734

PS Form 3811, July 1999 A Domestic Return Receipt

U.S. Postal Service
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(Domestic Mail Only; No Insurance Coverage Provided)

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Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here
AUG 20 2001

7001 0320 0005 9387 1734

Sent To Mr. Micheal Safford
Operations Coordinator
Street, Apt. No.; or PO Box No. Petroglyph Operating Co., Inc.
City, State, ZIP+4 P.O. BOX 607
Roosevelt, UT 84066

PS Form 3800, January 2001 See Reverse for Instructions

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
http://www.epa.gov/region08

AUG 20 2001

CONCURRENCE COPY

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Additional Well to Area Permit**
Antelope Creek Waterflood
EPA Area Permit No. UT2736-00000
Duchesne County, Utah

Dear Mr. Safford:

Your request of June 6, 2001, that the following production well be converted to a Class II enhanced oil recovery well and added to the Antelope Creek Waterflood, as authorized under EPA Area Permit No. UT2736-00000, is hereby granted.

NAME	LOCATION	EPA WELL PERMIT NO.
Ute Tribal #29-14	SE SW Section 30 T 5 S - R 3 W Duchesne County, UT	UT2736-04641

This additional well is within the boundary of the existing Area Permit for the Antelope Creek Waterflood (UT2736-00000), and this addition is made according to the terms and conditions of that Permit. Unless specifically mentioned in this authorization, conversion is being made under the provisions of 40 CFR §144.33 and the terms and conditions of the original Permit. The proposed well location, well schematic, conversion procedures with/schematic, plugging and abandonment plan with/schematic, and Cement Bond Log (CBL), submitted by your office, have been reviewed and approved as follows:

(1) The **conversion** plan for this production well has been reviewed, and found satisfactory. EPA analysis of the CBL for this well **has not identified** a minimum interval of adequate cement within the **confining zone** (3,850' to

CEW 8/24/01

8P-W-GW Dispatch 8/16/01

8P-W-GW 8/16/01 DG mailed 8/20/01 DG

8/20/01

8P-W Taylor 8/16/01

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3,964'), pursuant to Region 8 Ground Water Section Guidance No. 34. Therefore, it **has not** been determined that cement in this well provides an effective barrier to upward movement of fluids through vertical channels adjacent to the wellbore (Part II Mechanical Integrity [MI] pursuant to 40 CFR § 146.8 (2). The **permittee is then required to demonstrate Part II MI, pursuant to standards of Region 8 GROUND WATER SECTION GUIDANCE NO. 37 Demonstrating Part II (external) Mechanical Integrity for a Class II injection well permit.**

(2) **Maximum injection pressure (MIP)** - please reference the Final Area Permit UT2736-00000, Part II. Section C.5.(b) "the maximum surface injection pressure (MIP) shall not exceed **1900 psig". Until such time that a step-rate injectivity test (SRT) has been performed and approved by the EPA, the initial maximum surface injection pressure (MIP) for the Ute Tribal #29-14 shall not exceed 1900 psig.**

Final Area Permit (UT2736-00000), has provisions whereby the permittee may request an increase, or decrease, in the maximum surface injection pressure.

(3) The **plugging and abandonment plan and schematic,** submitted by the permittee has been reviewed, and approved w/changes by the EPA. The permittee shall add a 100 foot cement plug across the base of USDWs, 1,200 feet to 1,300 feet.

Underground Sources of Drinking Water (USDWs). The base of the USDWs in the Ute Tribal #29-14 is approximately 1,253 feet below ground level and is located within the Uinta Formation. The source for this USDW information is formation water analyses submitted by the operator for twenty-two (22) wells within the initial AOR, and from Publication No. 92 (1987), prepared jointly by the USGS and the Utah Division of Oil, Gas, and Mining.

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(3) the Permittee has submitted for review and approval **Part I (Internal) and Part II (External) of the mechanical integrity test (MIT)**; EPA form enclosed with current MIT Guidance No. 37.

Please be aware that Petroglyph does not have authorization to begin injection into the Ute Tribal #29-14 until the items listed above have been approved by the EPA and Petroglyph has received written authorization to begin injection from the EPA.

All other provisions and conditions of the Permit remain as originally issued July 12, 1994, and revised April 30, 1998.

If you have any questions, please contact Mr. Dan Jackson at 303.312.6155. Also, please direct the above requirements to the Ground Water Program Director at the above letterhead address, citing **MAIL CODE 8P-W-GW**. Thank you for your continued cooperation.

Sincerely,

Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

Enclosure: Mechnical Integrity Test Form (MIT)
Current MIT Guidance No. 37

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Committee
Ute Indian Tribe

Ms. Elaine Willie, Environmental Coordinator
Ute Indian Tribe

Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
BLM - Vernal District Office

Mr. Gilbert Hunt
State of Utah Natural Resources
Utah Division of Oil, Gas & Mining