2/24/20/6 LOGGED IN

TPT

PMAM1605554520

ABOVE THIS LINE FOR DIVISION USE ONLY

#### **NEW MEXICO OIL CONSERVATION DIVISION**

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



		ADMINISTRATIVE APP	LICATION CHECK	LIST
TH	HIS CHECKLIST IS M	IANDATORY FOR ALL ADMINISTRATIVE APPLIC	CATIONS FOR EXCEPTIONS TO DIVISION THE DIVISION LEVEL IN SANTA FE	ON RULES AND REGULATIONS
Applic	[DHC-Dow	<b>s:</b> ndard Location] [NSP-Non-Standard nhole Commingling] [CTB-Lease Cool Commingling] [OLS - Off-Lease	Proration Unit] [SD-Simultan Commingling] [PLC-Pool/Lea Storage] [OLM-Off-Lease N X-Pressure Maintenance Expa Pl-Injection Pressure Increase cation] [PPR-Positive Produ	use Commingling] leasurement] unsion] e] ection Response]
[1]	TYPE OF AF	PPLICATION - Check Those Which Location - Spacing Unit - Simultane NSL NSP SD	Apply for IAI	I-406°B LENergysenviza 6368
	Check [B]	Cone Only for [B] or [C] Commingling - Storage - Measurem DHC CTB PLC		LM
	[C]	Injection - Disposal - Pressure Incre WFX PMX SWD	ease - Enhanced Oil Recovery IPI	PR
	[D]	Other: Specify		- 10 (1) - 10 (2)
[2]	NOTIFICAT [A]	ION REQUIRED TO: - Check Thos  Working, Royalty or Overridin		Apply Ley
	[B]	☐ Offset Operators, Leaseholders ☐ Application is One Which Req		-Belco # 2 30-015-25433 Pool
	[D]	Notification and/or Concurrent U.S. Bureau of Land Management - Commission	Approval by BLM or SLO	-Sun's Deleware 96100
	[E]	For all of the above, Proof of N	Notification or Publication is At	
	[F]	Waivers are Attached		
[3]		CURATE AND COMPLETE INFO	DRMATION REQUIRED TO	PROCESS THE TYPE
	al is <mark>accurate</mark> a	<b>TION:</b> I hereby certify that the inform nd <b>complete</b> to the best of my knowle quired information and notifications a	dge. I also understand that no	
	Note	Statement must be completed by an individ	dual with managerial and/or supervis	sory capacity.
David	H. Alvarado	Dan Haling	SENM Fluid Dis	strict Mgr. 02-22-16
Print o	r Type Name	Signature	Title david.alvarado@basi	Date cenergyservices.com

e-mail Address

#### Basic Energy Services L.P.

#### 801 Cherry Street

Ft Worth, TX 76102

January 22, 2016

New Mexico Oil Conservation Division

**Engineering Bureau** 

1220 South St. Frances Dr.

Santa Fe, New Mexico 87505

Attn:

Terry G. Warnell EMNRD

Re:

Request for Increase in Maximum Allowable Surface Injection Pressure

Belco St. #2

2310 FNL 1980 FWL

Unit Letter "F", Section 20, T23S, R28E

Basic Energy Services L.P. respectfully requests approval to increase the Maximum allowable surface injection pressure on its Belco St. # 2 SWD well.

Attached please find the following:

- 1) Step-rate test analysis
- 2) Current water disposal permit SWD-1292, IPI-406-A
- 3) Log section covering the injection interval
- 4) Current Wellbore schematic
- 5) Form C-103 request for increase in allowable surface injection pressure

As shown with the attached analysis, it has been determined that the fracture extension pressure at surface is 1,230 PSI. Applying a safety factor of 20 psi, Basic Energy Services L.P. respectfully request approval to increase the maximum allowable surface injection pressure to 1,210 PSI from the current maximum allowable pressure of 1,056 PSI.

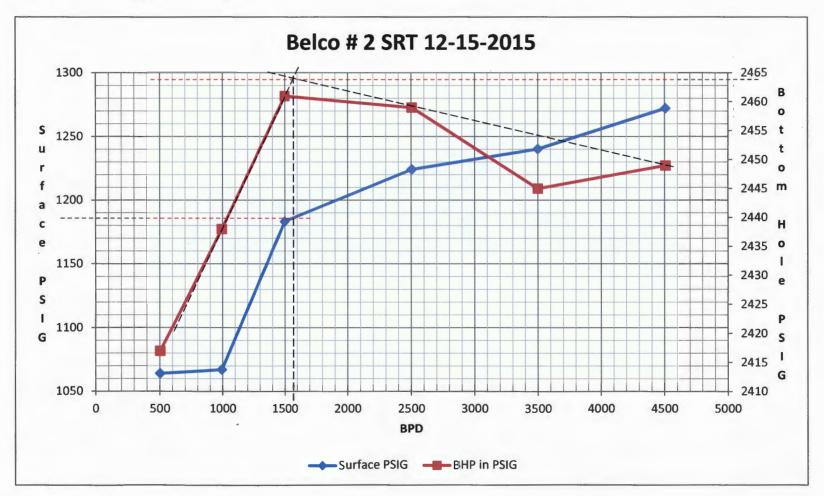
Thank you,

David H. Alvarado

Basic Energy Services L.P.

SENM District Fluids Manager

Rate BPD	Surface PSIG	<b>BHP in PSIG</b>	Tool set @ 3110'
504	1064	2417	Perforations 2540'-3680'
994	1067	2438	Surface PSIG @ 877# Temp Surface @ 48.5 deg F
1498	1183	2461	BTM. Hole PSIG @ 2416# BTM Hole Temp. @ 92 deg. F
2506	1224	2459	Formation Parting Pressure 1185 psi (.47 psi/ft)
3499	1240	2445	1185psi - 50 psi = 1135 psi (.45 psi/ft)
4507	1272	2449	





Belco State #2 December 15, 2015

#### **JOB INFORMATION SHEET**

	Company Information	
Company Name:	Basic Energy Services	
	Well Information	
Well Name:	Belco State #2	
Location:	Loving, NM	
Field - Pool:	Belco State	
Status:	Disposal	
	Test Information	
Type of Test:	Step Rate Test	
Gauge Depth:	3870ft	
Production Interval:	2540-2620, 2696-2780, 2840-2900, 2970-3020, 3056-3070, 3135-3145,	3354-
	3364, 3380-3430, 3595-3680	
Tubing Pressure:	877 psi	
Status:	Disposal	
Temperature @ Run Depth	92.11 degF	
Surface Temperature:	48.5 degF	
	Gauge Information	
	Top Recorder Bottom Recorder	
Serial Number:	79695	
Calibration Date:	10/1/15	
Pressure Range:	10000 psi	
	Comments	
	THE	

## State of New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez

Governor

David Martin Cabinet Secretary

Tony Delfin
Deputy Cabinet Secretary

David R. Catanach, Division Director Oil Conservation Division



Administrative Order IPI-406-A
January 27, 2016
Administrative Application Reference No. pTGW1123748737
Administrative Application Reference No. pWVJ1530032978
Administrative Application Reference No. pPRG1602733983

Mr. David Alvarado SENM Distict Fluids Manager Basic Energy Services, LP 801 Cherry Street Ft. Worth, TX 76102

RE: Injection Pressure Increase; Correction of Order

UIC Class II Disposal Well SWD; Delaware Pool (96100)

Dear Sir:

Reference is made to your request on behalf of Basic Energy Services, LP (OGRID 246368) received on January 7, 2016, to increase the maximum allowed surface tubing pressure (in pounds per square inch (psi)) on the following well(s):

Well No.	API Number	UL-S-T-R	Injection Authority	Existing Pressure Limit (psl)	Existing Tubing OD (in)
Belco No. 2	30-015-25433	F-20-23S-28E	Administrative Orders: SWD-1292 and IPI-406	1056	21/8

Division reviewed the recent step rate test (SRT) results dated December 15, 2015, and the previous SRT results dated August 11, 2011, submitted in the application which supported the approval of administrative order IPI-406. Analysis of the SRT results for order IPI-406 found that the vendor improperly plotted the results which Division used in approving the pressure increase. Therefore, Division is correcting the approved injection pressure for this well as to prevent any additional fracturing of the formation and, possibly, the confining strata.

Based on the results of the previously submitted step rate injection test(s), the following shall be the new maximum surface pressure limit(s) while equipped with **injection** tubing:

Well No.	Step Rate	New Pressure	While	Injection	Pressure
	Test Date	Limit (psi)	Injecting	Interval (ft)	Gradient (psi/ft)
Belco No. 2	8/11/2011	880	water	2540 to 3680	0.35

This approval is based on the provision that the tubing size, packer setting depth and completion interval for the well(s) does not change. Any future requested pressure increase will require resubmission of additional data and/or a new step-rate test. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in the well(s). This approval is subject to your being in compliance with all other Division rules, including but not limited to Division Rule 19.15.5.9 NMAC.

The previous pressure increase, approved in administrative order IPI-406 dated September 19, 2011, is hereby rescinded with the approval of this order.

The Division Director may rescind any injection permit if it becomes apparent that the injected fluid is not being confined to the permitted disposal interval or is endangering any fresh water aquifer.

Sincerely,

DAVID R. CATANACH

Director

DRC/prg

cc: Oil Conservation Division - Artesia District Office

State Land Office - Oil, Gas, and Minerals Division

Well File API 30-015-25433

Susana Martinez Governor

John H. Bemis Cabinet Secretary-Designate

Brett F. Woods, Ph.D. Deputy Cabinet Secretary Jami Bailey Division Director Oil Conservation Division

Administrative Order Pk406



September 19, 2011

9, 2011 Application No. pTGW1123748737

Basic Energy Services LP 500 W. Illinois, Suite 100 Midland, TX 70702

Attention: David Alvarado

RE: Injection Pressure Increase

Belco State Well No. 2, Unit Letter F Section 20, T23 South, R28 East Eddy County, New Mexico

Dear Mr. Alvarado:

Reference is made to your request on behalf of Basic Energy Services LP (OGRID 246368) received by the Division on August 25, 2011 to increase the surface injection pressure on the Belco State Well No. 2.

This well was approved by the Division for injection into the Delaware Mountain Group Formation from approximately 2,540 feet to 3,680 feet with SWD-1292 and given a maximum surface injection pressure of 508 psi.

It is our understanding that this well will not take a sufficient volume of water at this pressure limit and a higher pressure limit is needed. It is also understood that an increase will not result in the fracturing of the injection formation and confining strata.

Based on a step rate injection test for this well run by Cardinal Surveys on August 15, 2011 we feel it does support an increase to psi. Any future requested increase beyond 1056 psi will require resubmission of additional data and a new step-rate test.



Administrative Order IPI-406 Basic Energy Services, LP September 19, 2011 Page 2 of 2

You are hereby authorized to increase the surface injection pressure on the following well located in Eddy County, New Mexico:

Well Number	Delaware Mountain Group Perforations	Surface Injection Pressure
Belco State Well No. 2 API No. 30-015-25433, Unit F, Section 20, Township 23 South, Range 28 East	2540'-3680'	1056 PSI

This approval is based on a provision that the tubing size, packer setting depth and perforation depths do not change. You are prohibited from injecting at pressures that would induce fracturing.

The operator is responsible for ensuring injected waters do not migrate upward inside or outside of this casing and enter formations above the permitted injection interval.

This approval is subject to your being in compliance with all other Division rules, including but not limited to Division Rule 19.15.5.9 NMAC.

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected fluid is not being confined to the injection zone or is endangering any fresh water aquifers.

The injection authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

Sincerely,

Jami Bailey Director

JB/tw

cc:

Oil Conservation Division - Artesia

Susana Martinez

John H. Bernie Cabinet Secretary-Designate

Brett F. Woods, Ph.D. Deputy Cabinet Secretary Jami Bailey Division Director Oli Conservation Division



Administrative Order SWD-1292 July 5, 2011

## ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of 19.15.26.8B NMAC, Basic Energy Services, LP seeks an administrative order to utilize its Belco Well No. 2 (API 30-015-25433) located 2310 feet from the North line and 1980 feet from the West line, Unit Letter F of Section 20, Township 23 South, Range 28 East, NMPM, Eddy County, New Mexico, for produced water disposal purposes.

#### THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of 19.15.26.8B NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met and the operator is in compliance with 19.15.5.9 NMAC.

#### IT IS THEREFORE ORDERED THAT:

The applicant, Basic Energy Services, LP, is hereby authorized to utilize its Belco Well No. 2 (API 30-015-25433) located 2310 feet from the North line and 1980 feet from the West line, Unit Letter F of Section 20, Township 23 South, Range 28 East, NMPM, Eddy County, New Mexico, for disposal of oil field produced water (UIC Class II only) into the Delaware Mountain Group through perforations from 2540 feet to 3680 feet through lined tubing and a packer set within 100 feet of the permitted disposal interval.

Prior to commencing disposal, the well shall be plugged back with cast iron bridge plug and cement to within 200 feet below the lowermost permitted disposal interval.

#### IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the disposed water enters only the proposed disposal interval and is not permitted to escape to other formations or onto the



surface.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC.

The wellhead injection pressure on the well shall be limited to no more than 506 pet. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate-Tests-

The operator shall notify the supervisor of the Division's district office of the date and time of the installation of disposal equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate ipso facto. The Division, upon written

request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.

AMEBAILEY

Director

JB/wvjj

cc: Oil Conservation Division - Artesia



# Main Pass

Database File:

tasic(07-20-11).db

Dataset Pathname:

belco/fed\_2\_swd/run1/pass4.101

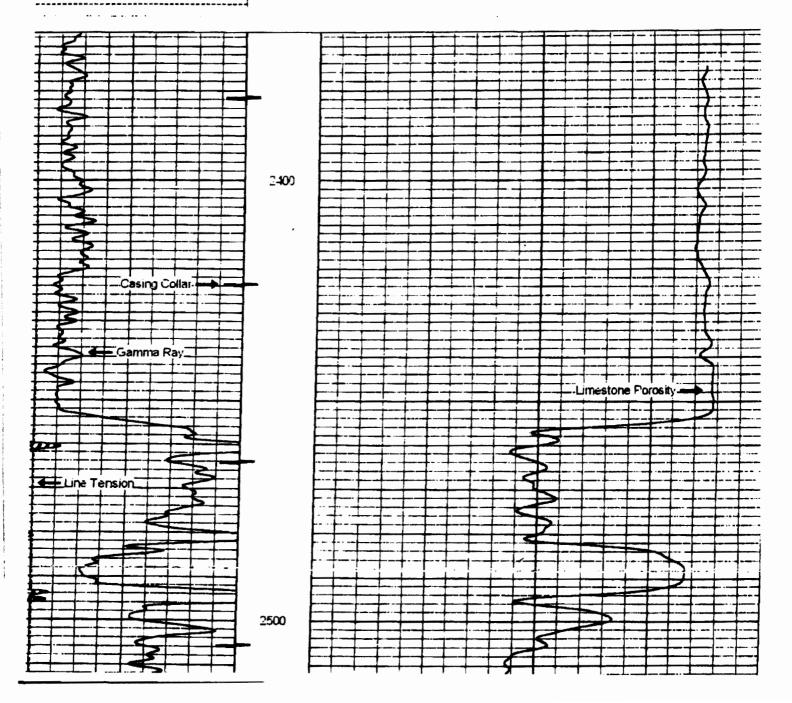
Presentation Format:

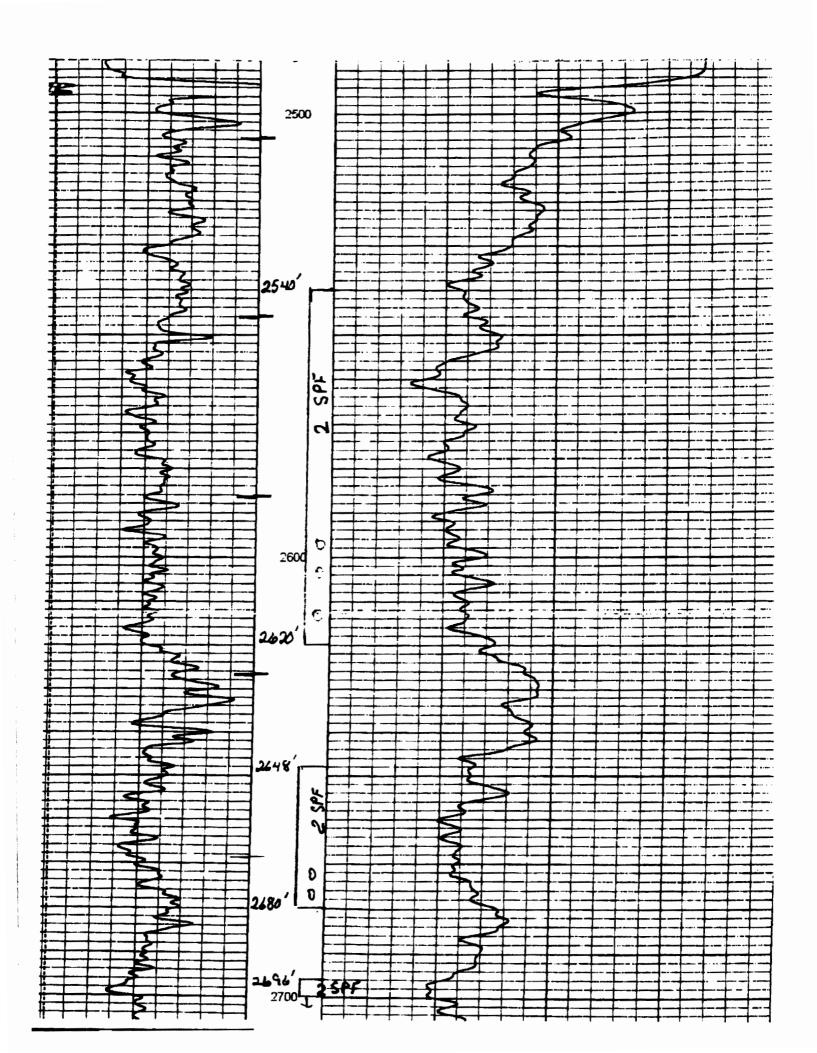
cnt

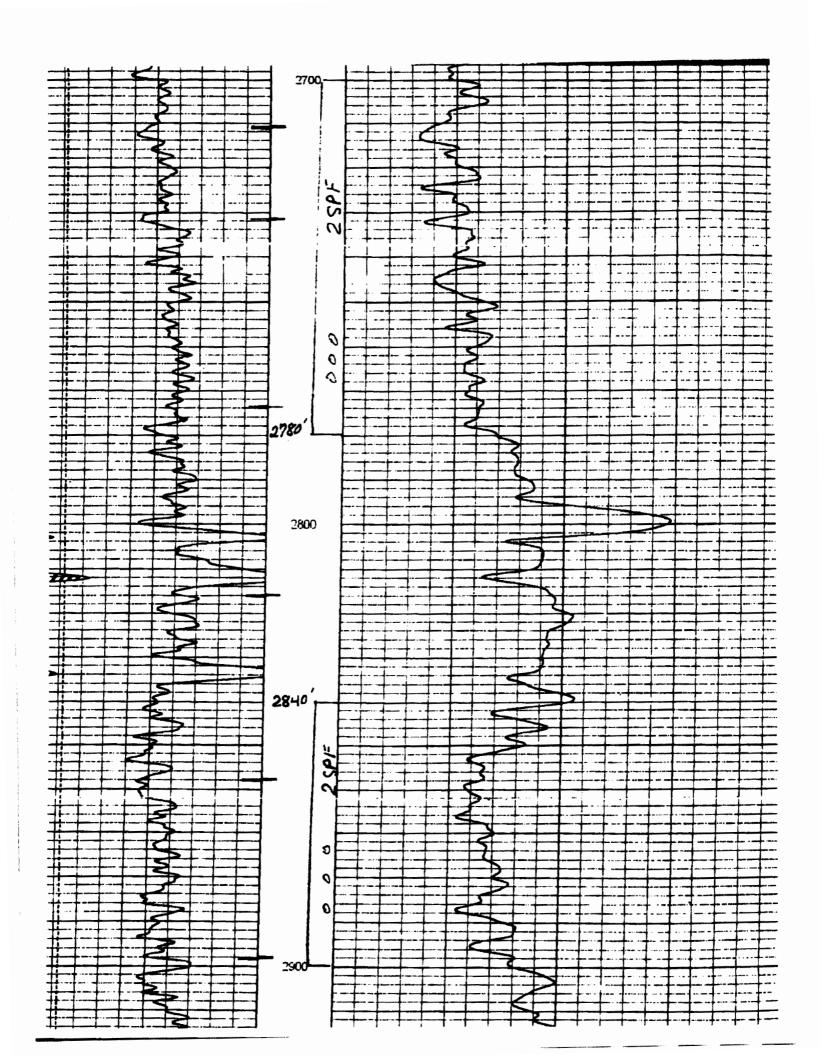
Dataset Creation Charted by:

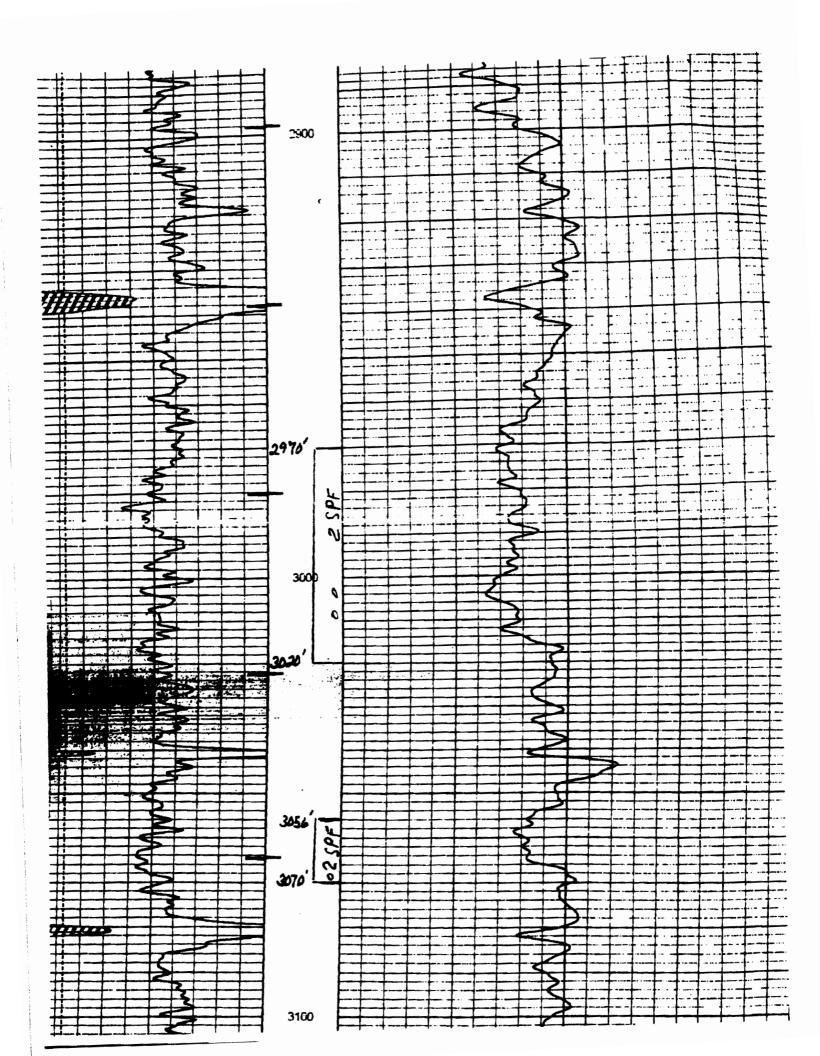
Wed Jul 20 11:03:39 2011 Depth in Feet scaled 1:240

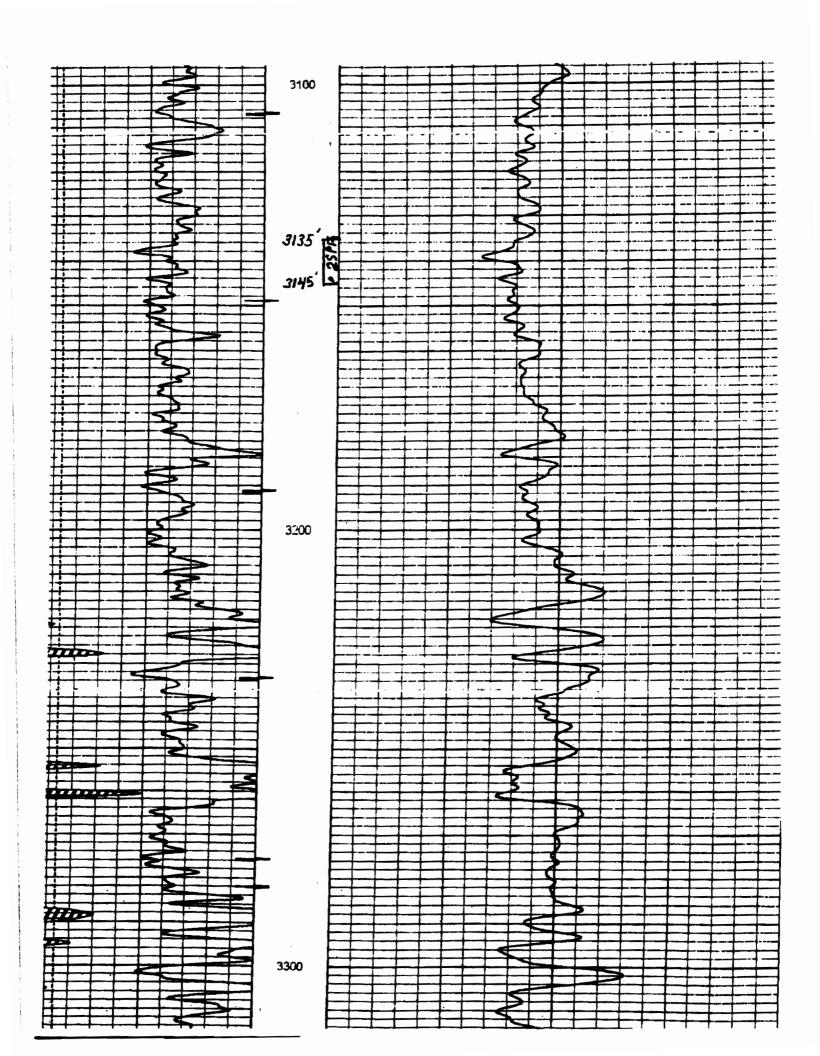
	Gamma Ray (GAPI)	100	0	CCL	5	30	Limestone Porosity (pu)	-10
3	BU Garnma Ray (GAPI)	200				70	Backup Limestone Porosity (pu)	3(
)	Collar Locator	0						
	Line Tension (lb)	<b>40</b> 00	]					

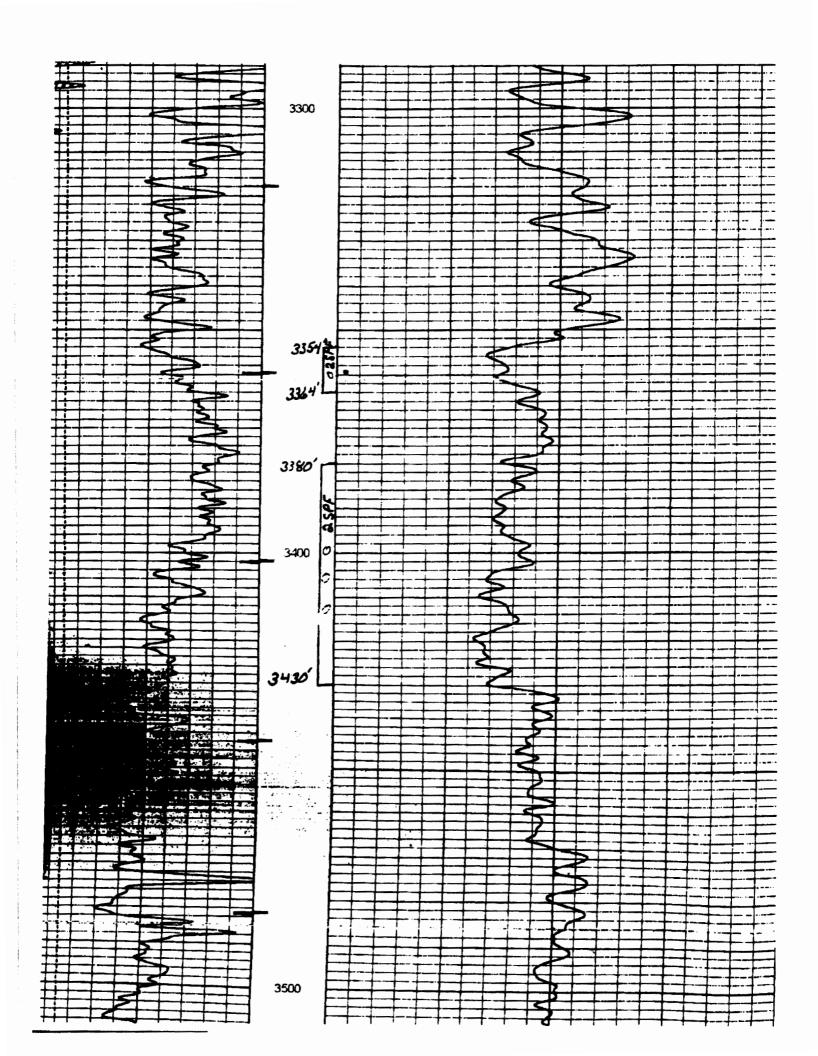


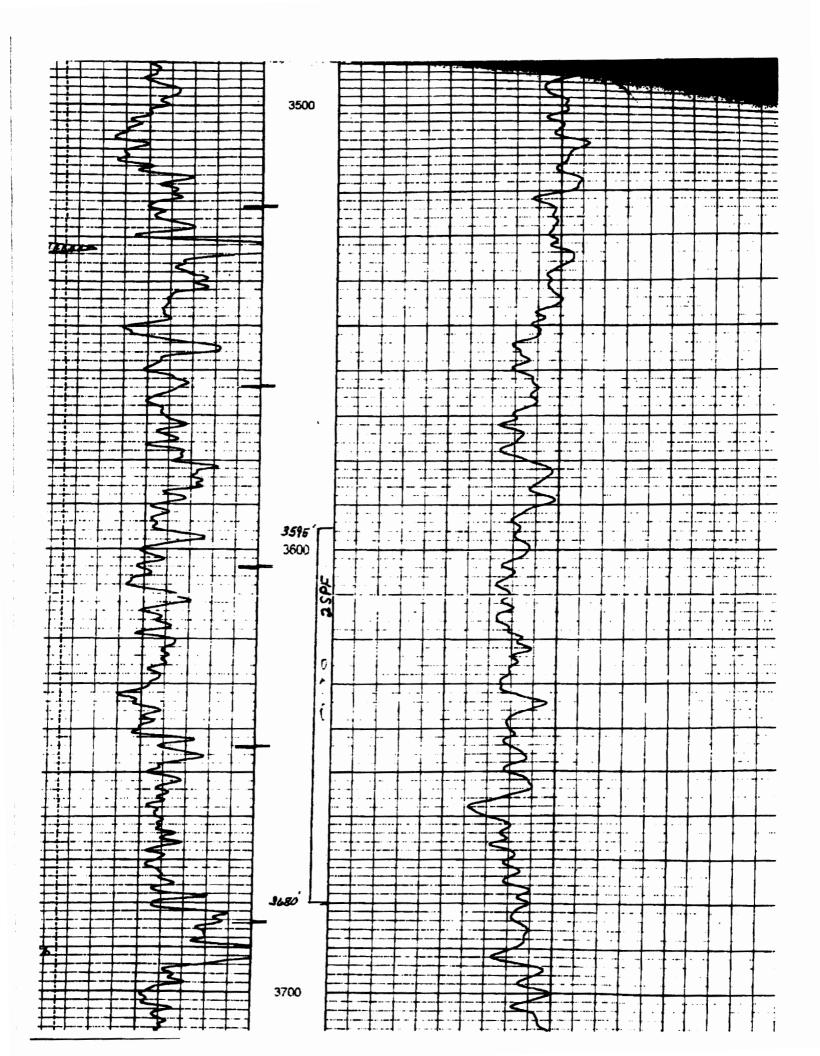


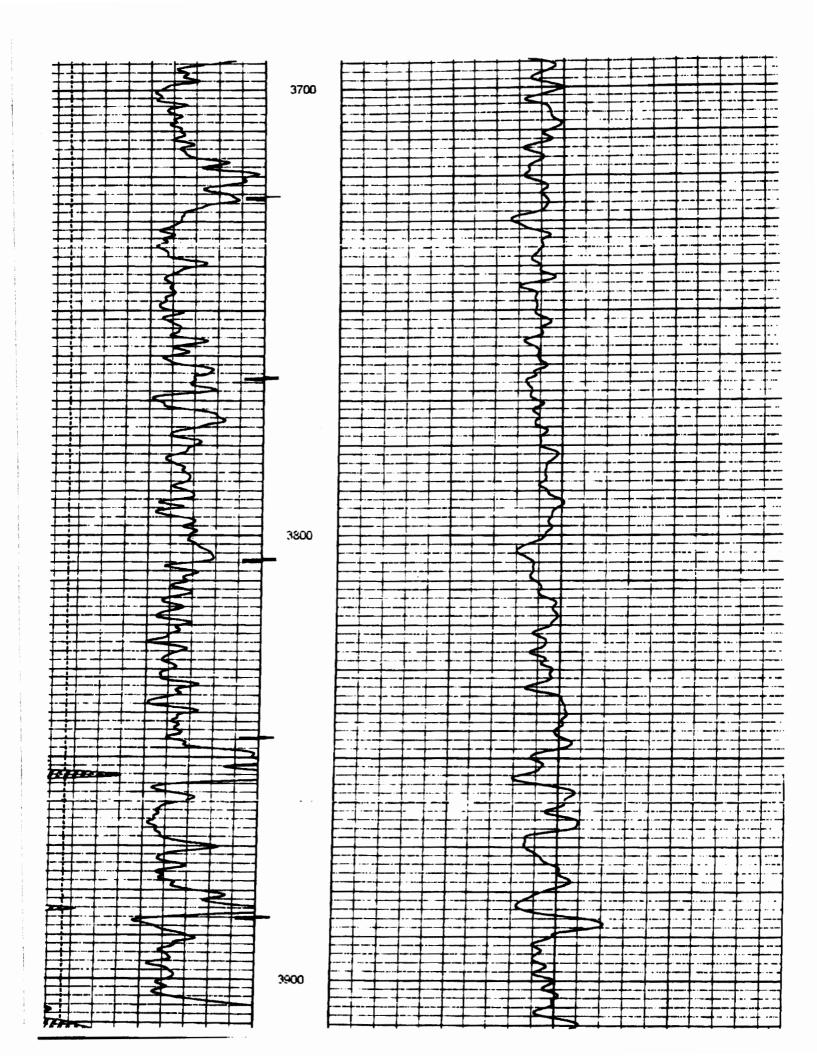












### Basic Energy Services L.P. Current Belco # 2 SWD 5/20/2015 Unit F, Sec 20, T23S, R28E Eddy County API #: 30-015-25433 2-7/8" 8rd Tree Connection: KB: TOC N/A **Surface Hole** Surface Casing: 85/8" 24ppf J-55 475" Bit Size: 12 1/4" 200sks circulated Setting Depth @ 475' Inter. Hole Bit Size: Interm. Casing: Setting Depth: 2-7/8" J55 IPC set @ 2507.50 ' Btm Packer Set at 2515.95' 5 1/2 13-20# X 2 7/8 AS1-X W/CARBIDES NICKLE PLATED 5 1/2 X 27/8 ON/OFF TOOL W/SS TOP SUB 2 1/4 "F' SS PROFILE 2 7/8 FRAME Cement Data: Perfs. @ (2620'-2540'),(2680'-2648')(2780'-2696') (2900'-2840') (3020'-2970') Lead -(3070'-3056') (3145'-3135') (3364'-3354') (3430'-3380')(3680'-3595') Tail -TOP CMT @ 3870' Note -CIBP Set @ 3896' perf @ 5846'-5865' PBTD: Production Csg: 5-1/2" 17# Casing 665 sks Circulated Setting Depth @ 5930' Bit Size: 7-7/8"

TD @ 5930'

Submit 1 Copy To Appropriate District	State of New Mexico	Form C-103
Office District 1 – (575) 393-6161  Energy,	Minerals and Natural Resources	Revised July 18, 2013
1625 N. French Dr., Hobbs, NM 88240		WELL API NO.
District II - (575) 748-1283 811 S. First St., Artesia, NM 88210 OIL C	ONSERVATION DIVISION	30-015-25433  5. Indicate Type of Lease
<u>District III</u> – (505) 334-6178	220 South St. Francis Dr.	STATE FEE
1000 Rio Brazos Rd., Aztec, NM 87410 District IV – (505) 476-3460	Santa Fe, NM 87505	6. State Oil & Gas Lease No.
1220 S. St. Francis Dr., Santa Fe, NM		
87505 SUNDRY NOTICES AND RE	DODTS ON WELLS	7. Lease Name or Unit Agreement Name
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL		7. Lease Name of Ome Agreement Name
DIFFERENT RESERVOIR. USE "APPLICATION FOR PE	RMIT" (FORM C-101) FOR SUCH	Belco State
PROPOSALS.)  1. Type of Well: Oil Well Gas Well	Other SWD	8. Well Number
	Other SWB	# 2
2. Name of Operator	D	9. OGRID Number
Basic Energy Services L  3. Address of Operator	.P.	246368 10. Pool name or Wildcat
801 Cherry Street Ft W	orth, TX 76102	Delaware Mountain Group
4. Well Location	,	
	et from the North line and	1980 feet from the West line
	Township 23S Range 28	
	on (Show whether DR, RKB, RT, GR, e	
12. Check Appropriate	Box to Indicate Nature of Notic	e, Report or Other Data
NOTICE OF INTENTION	TO:   SI	JBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK PLUG AND	_	<u> </u>
TEMPORARILY ABANDON CHANGE P		DRILLING OPNS.□ P AND A □
PULL OR ALTER CASING   MULTIPLE		——————————————————————————————————————
DOWNHOLE COMMINGLE	_	
CLOSED-LOOP SYSTEM	_	
OTHER:	OTHER: Reque	est increase in allowable surface injection PSIA
13 Describe proposed or completed operation	ns (Clearly state all pertinent details	and give pertinent dates, including estimated date
of starting any proposed work). SEE RU	LE 19.15.7.14 NMAC. For Multiple (	Completions: Attach wellbore diagram of
proposed completion or recompletion.	•	•
Accompanying this form are the results o	f a step-rate injection test performed o	n 12/15/2015. The purpose of this test was to
Support a request for an increase in the m	aximum allowable surface injection p	ressure.
Because of the miss plotted data and IPI -	<ul> <li>406 being rescinded of September 19</li> </ul>	9, 2011 with the new Administrative Order IPI –
406-A 880 PSIG this SRT will be applied	to the new Order IPI – 406- A.	
It has been determined that the fracture ex	etension is 1 185 PSI. Applying a safe	ety factor of 50 PSI, Basic Energy Services
L.P. respectfully request approval to incre		
, , , , , , , , , , , , , , , , , , ,		
Spud Date:	Rig Release Date:	

TITLE SENM District Fluids Mgr. DATE 02/22/2016

Type or print name David H. Alvarado E-mail address: david.alvarado@basicenergyservices.com PHONE: 575-746-2072

For State Use Only

APPROVED BY: TITLE DATE

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

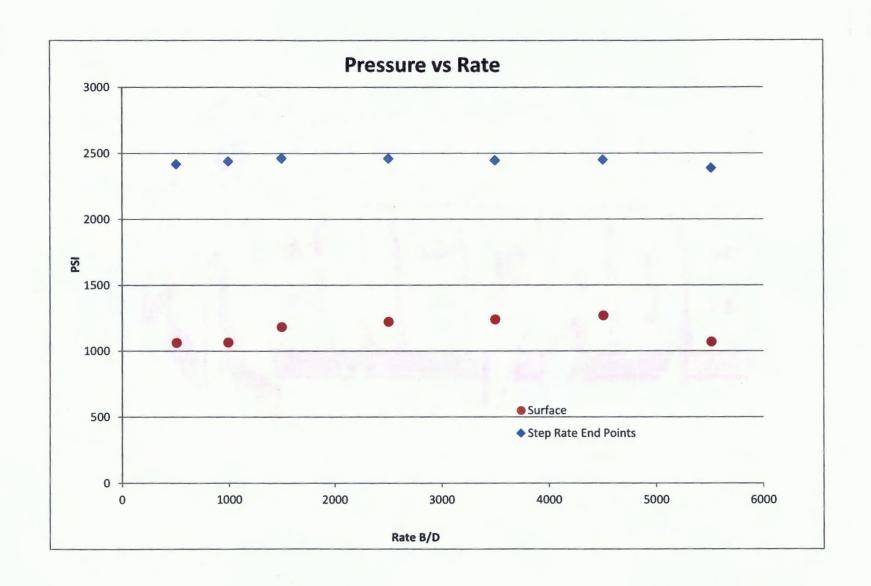
Conditions of Approval (if any):

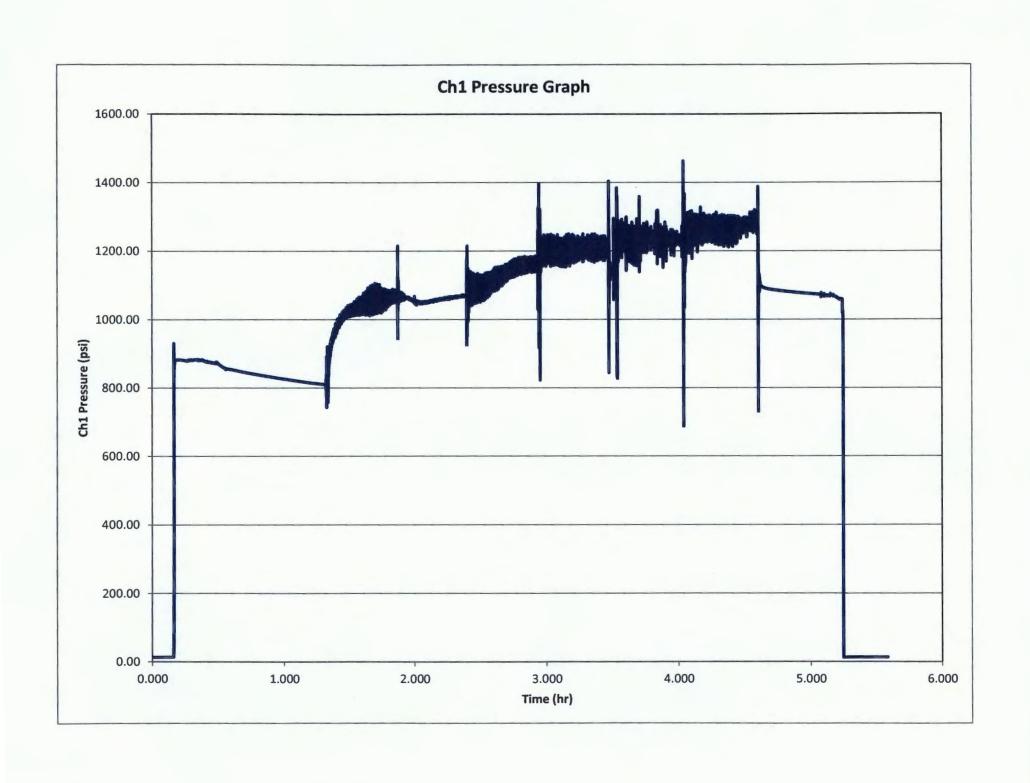


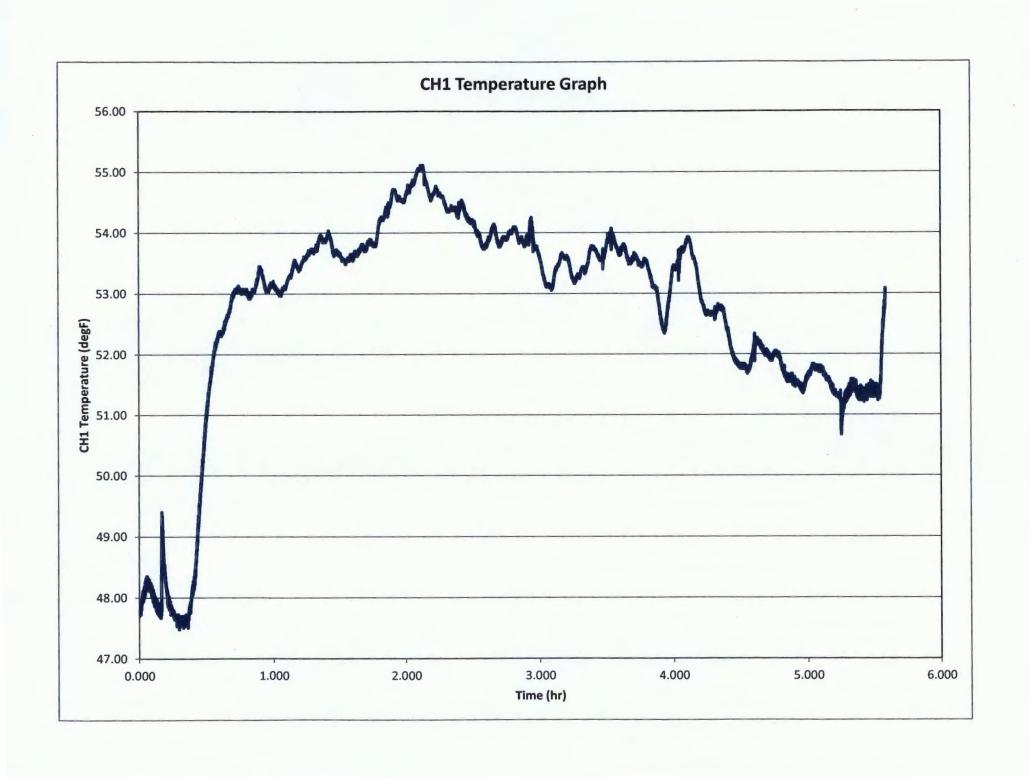
### \*\*\*\*\*\*\*\*\*\*\*\*\*

### STEP RATE TEST

	RATE B/D	Date	Time	BH PRESS	SURF. PRESS	Comments
Step 1	504	12/15/2015	9:59 AM	2416.46	1063.64	
Step 2	993.6	12/15/2015	5:32 AM	2438.31	1066.72	
Step 3	1497.6	12/15/2015	11:03 AM	2460.71	1183.22	
Step 4	2505.6	12/15/2015	11:37 AM	2458.8	1223.53	
Step 5	3499.2	12/15/2015	12:10 PM	2445.04	1240.05	
Step 6	4507.2	12/15/2015	12:43 PM	2449.11	1271.82	
Fall Off		12/15/2015	1:14 PM	2387.17	1071.03	
	Company:	Basic Energ	y Services		Recorded By:	M. Flores
	Well:	Belco State	#2			
	Field:	Beloo State			Truck Number:	A STATE OF THE PARTY OF THE PAR
	County:				District:	Levelland
	State:	New Mexico				
		<b>克</b> 。斯克克			Test Type:	STEP RATE TESTS
	<b>Tubing Size:</b>	2 7/8"				
	Nipple Depth:					
	Perforations:					
Plug	Back Depth	N/A		1948 SAIC 19		









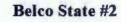
## **Pressure and Temperature Report - Bottom**

Belco State #2

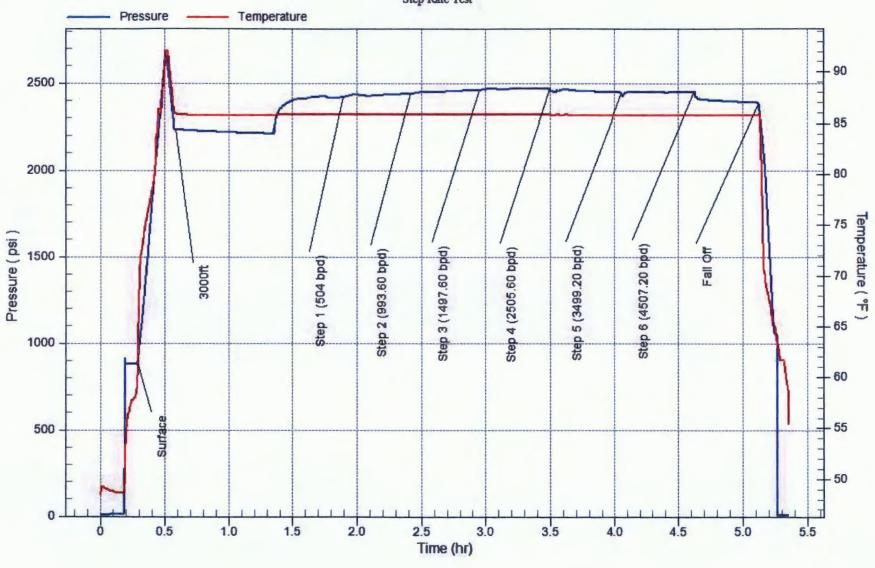
Rate bpd	Pressure psi	Temperature degF	Gradient psi/ft	
Step 1 - 504.00	2416.46	85.79	0.0000	
Step 2- 993.60	2438.31	85.79	0.0446	
Step 3- 1497.60	2460.71	85.79	0.0444	
Step 4- 2505.60	2458.80	85.78	-0.0019	
Step 5- 3499.20	2445.04	85.77	-0.0138	
Step 6- 4507.20	2449.11	85.76	0.0040	
Fall Off	2384.17	85.75	-0.0644	

**Analysis Summary** 

Depth ft	Gradient psi/ft
0.00	
	-0.0064
5515.20	

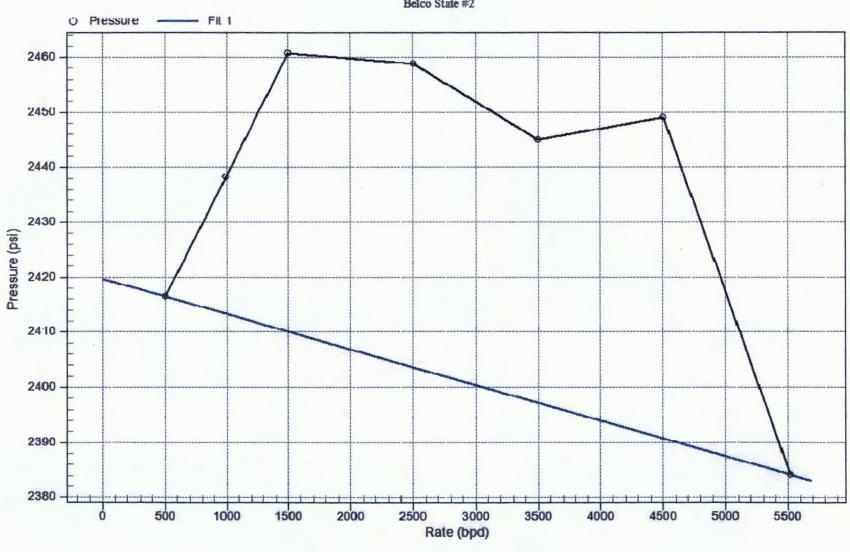


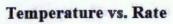




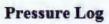
#### Pressure vs Rate

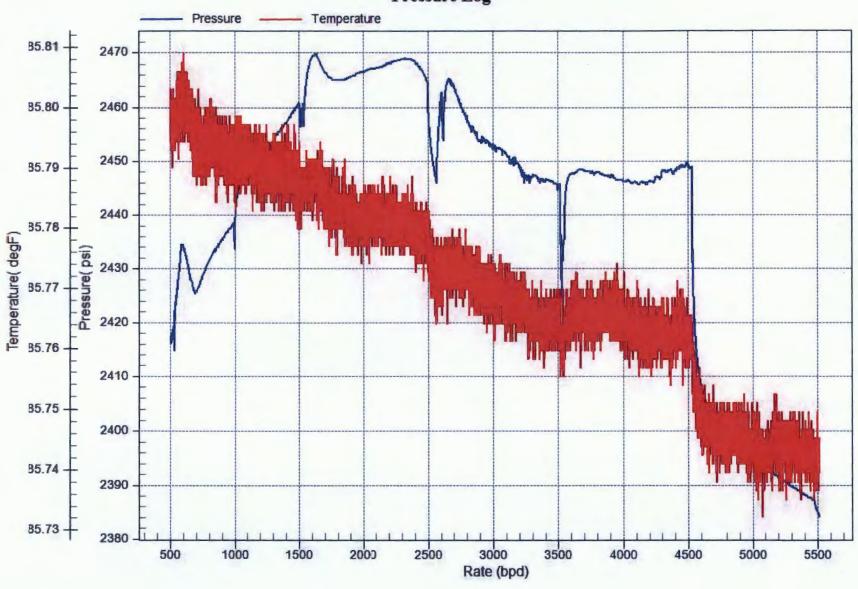
Belco State #2











## **Pressure and Temperature Report - Surface**

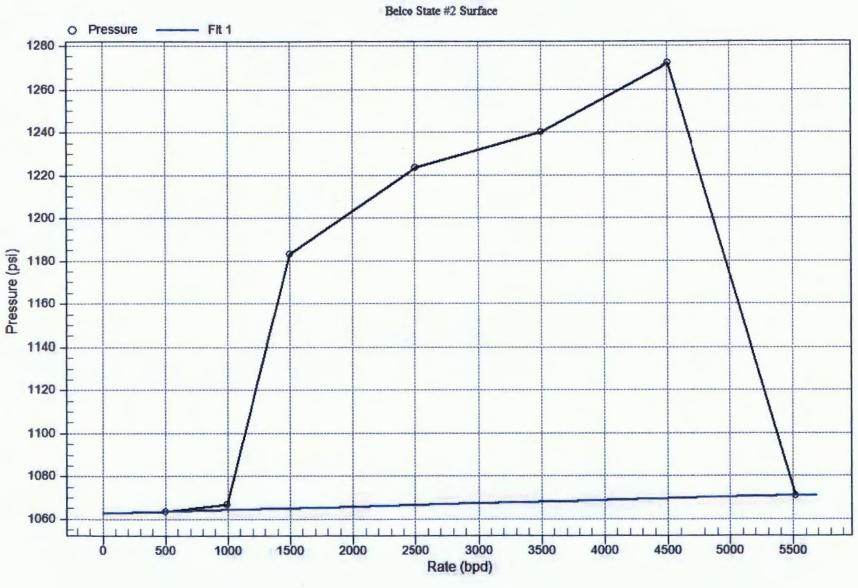
Belco State #2 Surface

Rate bpd	Pressure psi	Temperature degF	Gradient psi/ft	
Step 1- 504.00	1063.64	54.24	0.0000	
Step 2- 993.60	1066.72	54.45	0.0063	
Step 3- 1497.60	1183.22	54.12	0.2311	
Step4- 2505.60	1223.53	53.65	0.0400	
Step5- 3499.20	1240.05	53.52	0.0166	
Step 6- 4507.20	1271.82	52.00	0.0315	
Fall Off	1071.03	51.72	-0.1992	

**Analysis Summary** 

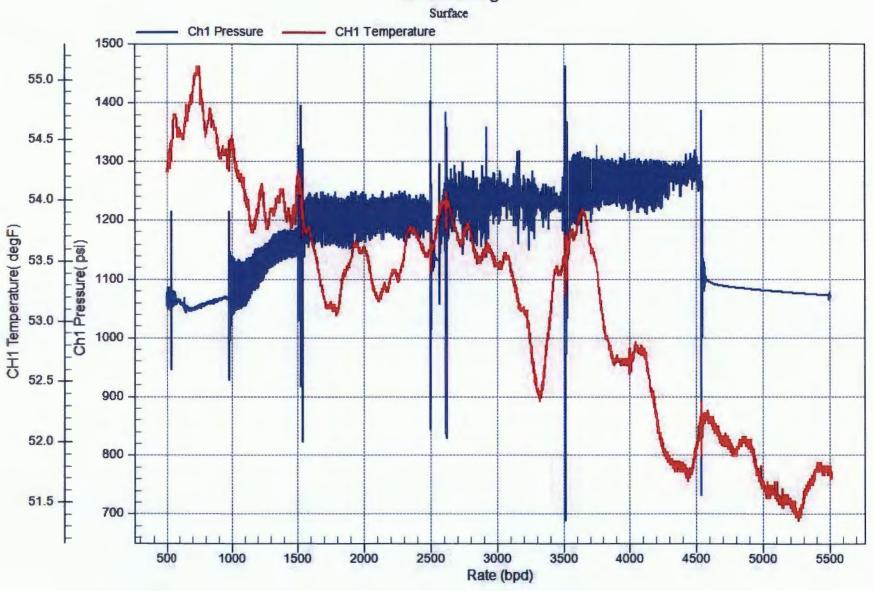
Depth ft	Gradient psi/ft
0.00	
	0.0015
5515.20	

#### Pressure vs.Rate





Pressure Log



### McMillan, Michael, EMNRD

From: Alvarado, David < David. Alvarado@basicenergyservices.com>

Sent: Monday, February 29, 2016 4:16 PM

To: McMillan, Michael, EMNRD

Cc: Goetze, Phillip, EMNRD; Inge, Richard, EMNRD; Jones, William V, EMNRD

**Subject:** RE: Belco Well No. 2 IPI.

#### Hello Michael,

I had the boys shut the Belco # 2 in at the end of Oct. showing 1250 PSIG. It had been running 1030 PSIG to 1050 PSIG before. It stayed shut in until the SRT on 11-15-15.

On 11-15-15 my notes show we were to start at around 7:30 am that's the time I arrived, they were almost ready to start. I would say 8:00am wire line started down hole. I was told that our gauge on the well was showing a 1000 PSI.

Once rigged up and we went to btm. to tag any fill (No fill was shown). The tool was placed at 3000' and sat idle for 49 min. 0 BPD and surface pressure with Renegade's gauge showed 811 PSIG with BHP 2211 PSIG. Our equipment gauge was overstating PSIG by 189#.

I will check with the men in the morning on current pressure or head over and check. Couldn't get any one to answer my call.

I get this information to you ASAP

Dave

From: McMillan, Michael, EMNRD [mailto:Michael.McMillan@state.nm.us]

Sent: Monday, February 29, 2016 4:11 PM

To: Alvarado, David < David. Alvarado@basicenergyservices.com>

Cc: Goetze, Phillip, EMNRD < Phillip.Goetze@state.nm.us>; Inge, Richard, EMNRD < richard.inge@state.nm.us>; Jones,

William V, EMNRD < William V. Jones@state.nm.us>

Subject: Belco Well No. 2 IPI.

#### David:

I am looking at the Belco Well No. 2 IPI. API 30-015-25433

I need the following

- I need the initial rate, Time, BHP, Surface PSI.
- Step rate 2 shows a time of 5:32AM, I assume it is 10:32 AM- is that correct?
- Is the current pressure of the well at 1056 psi?

Thank You

### Michael A. McMillan

Engineering and Geological Services Bureau, Oil Conservation Division 1220 South St. Francis Dr., Santa Fe NM 87505 O: 505.476.3448 F. 505.476.3462 Michael.mcmillan@state.nm.us

### SWD WELLS TWONSHIP 23 SOUTH RANGE 28 EAST EDDY COUNTY

API WELL #	TO THE STATE OF STREET AND A TABLE OF	Operator Name	Sec	Twnshp	Range	FNL/FSL	FEL/FWL	Last Insp	Order_No	inj Fm	Inj Interval	Grad	Appr Pri	Cum	Known Present grad	Known Present pri		Grad	Appr Pri
30-015- 28230	FEDERAL#15	CHEVRON U S A INC	D 1	23S	28E	1000N	1125W	8/28/2015	SWD-901	Delaware	5912-6099	0.20	1182	2707491					
30-015- 29735	LENTINI 1 FEDERAL#17	CHEVRON U S A INC	F 1	235	28E	1686N	2505W	8/28/2015	SWD-659;IPI-156	Bl Cn	2800-3000	0.29	800	783679					
30-015- 22754	CULEBRA BLUFF SWD#1	CHEVRON U S A INC	E 2	238	28E	1980N	860W	8/28/2015	SWD-481;IPI-309	Ch Cn	4300-4800	0.24	1052	6937009					
30-015- 23816	SWEARINGEN#1	RKI EXPLORATION & PRODUCTION, LLC	J 4	238	28E	1650S	1980E	10/20/2015	SWD-1280	BS	7070-9386	0.2	1414	1933554					
30-015- 42234	LVP SWD#1	RKI EXPLORATION & PRODUCTION, LLC	14	235	28E	2100S	385E	10/20/2015	SWD-1457;IPI-477	Bl Cn-Ch Cn	3400-4650	0.36	1225	561201					
30-015- 24424	NELL SWD#4	OXY USA INC	Н 9	238	28E	1980N	720E	8/14/2015	SWD-518; IPI-441	Bl Cn-Ch Cn	2652-3576	0.41	1084	2464288		1084	2956-3576	0.37	
30-015- 26764	EAST LOVING SWD#1	CHEVRON U S A INC	A 15	5 23S	28E	1157N	491E	6/29/2015	R-9509;IPI 281-A	Delaware	4216-4357	0.33	1400	5998160					
30-015- 25141	BELCO#1	BASIC ENERGY SERVICES, LP	E 20	238	28E	2200N	660W	9/24/2015	SWD-666	Delaware	5726-5809	0.20	1145	6180422			3950-5809	0.29	1145
30-015- 25433	BELCO#2	BASIC ENERGY SERVICES, LP	F 20	235	28E	2310N	1980W	5/22/2015	SWD-1292/IPI- 406A	Bl Cn	2540-3680	0.35	880	2625038	0.42	1056	2540-3680	0.45	
30-015- 26536	CANDELARIO#1	VANGUARD OPERATING, LLC	D 24	238	28E	660N	660W	8/19/2015	R-12224/IPI-274	Ch Cn	4304-4656	0.22	960	1522088					
30-015- 26122	PARDUE FARMS 27#8	CHEVRON MIDCONTINENT, L.P.	H 27	7 23S	28E	2069N	632E	8/28/2015	R-8930;1PI-424	Ch Cn	4394-4662	0.25	1100	5058435					
30-015- 24640	WATTS FEDERAL#1	BTA OIL PRODUCERS, LLC	A 31	238	28E	910N	800E	10/9/2015	SWD-572	Delaware/BS	5737-7775	0.20	1147	2076081					
30-015- 40496	PEARL#1	TREK OPERATING, LLC	O 34	23\$	28E	800S	2475E	8/3/2015	SWD-1339;IPI-463		3350-4900	0.34							
1:																			
The lin	The line below is a repeat of line 11; however, I made the pressure 1000																		
30-015- 25433	BELCO#2	BASIC ENERGY SERVICES, LP	F 20	23S	28E	2310N	1980W	5/22/2015	SWD-1292/IPI- 406A	Bl Cn	2540-3680	0.35	880	2625038			2540-3680	0.39	1000
BS=Bone Spring	Bl Cn = Bell Canyon	Ch Cn= cherry Canyon																	

### McMillan, Michael, EMNRD

From: Alvarado, David < David. Alvarado@basicenergyservices.com>

Sent: Wednesday, March 02, 2016 11:51 AM

To:McMillan, Michael, EMNRDSubject:RE: Belco Well No. 2 IPI.

Yes sir I am in Midland at a PBU meeting it will be in the morning Mike. I also was told that the well current PSI at the Belco 2 is 1000 PSI respectively.

Sent via the Samsung GALAXY S® 5, an AT&T 4G LTE smartphone

----- Original message -----

From: "McMillan, Michael, EMNRD" < Michael. McMillan@state.nm.us>

Date: 3/2/2016 12:22 PM (GMT-06:00)

To: "Alvarado, David" < David. Alvarado @basicenergyservices.com>

Cc: "Jones, William V, EMNRD" <William V.Jones@state.nm.us>, "Goetze, Phillip, EMNRD" <Phillip.Goetze@state.nm.us>, "Lowe, Leonard, EMNRD" <Leonard.Lowe@state.nm.us>

Subject: RE: Belco Well No. 2 IPI.

David:

Can you provide the raw data in a spreadsheet so we can further examine the data for the SRT?

Thank You

### Michael A. McMillan

Engineering and Geological Services Bureau, Oil Conservation Division 1220 South St. Francis Dr., Santa Fe NM 87505 O: 505.476.3448 F. 505.476.3462 Michael.mcmillan@state.nm.us

From: Alvarado, David [mailto:David.Alvarado@basicenergyservices.com]

Sent: Monday, February 29, 2016 4:25 PM

**To:** McMillan, Michael, EMNRD **Subject:** RE: Belco Well No. 2 IPI.

Michael the well was shut in oct.

Sent via the Samsung GALAXY S® 5, an AT&T 4G LTE smartphone

# State of New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez Governor

David Martin Cabinet Secretary

Tony Delfin
Deputy Cabinet Secretary

David R. Catanach, Division Director Oil Conservation Division



Administrative Order IPI-406-A January 27, 2016 Administrative Application Reference No. pTGW1123748737 Administrative Application Reference No. pWVJ1530032978 Administrative Application Reference No. pPRG1602733983

Mr. David Alvarado SENM Distict Fluids Manager Basic Energy Services, LP 801 Cherry Street Ft. Worth, TX 76102

RE: Injection Pressure Increase; Correction of Order

UIC Class II Disposal Well SWD; Delaware Pool (96100)

Dear Sir:

Reference is made to your request on behalf of Basic Energy Services, LP (OGRID 246368) received on January 7, 2016, to increase the maximum allowed surface tubing pressure (in pounds per square inch (psi)) on the following well(s):

Well No.	API Number	∵UL-S-T-R⊋	Injection Authority	Existing Pressure Limit (psi)	Tubing
Belco No. 2	30-015-25433	F-20-23S-28E	Administrative Orders: SWD-1292 and IPI-406	1056	21/8

Division reviewed the recent step rate test (SRT) results dated December 15, 2015, and the previous SRT results dated August 11, 2011, submitted in the application which supported the approval of administrative order IPI-406. Analysis of the SRT results for order IPI-406 found that the vendor improperly plotted the results which Division used in approving the pressure increase. Therefore, Division is correcting the approved injection pressure for this well as to prevent any additional fracturing of the formation and, possibly, the confining strata.

Based on the results of the previously submitted step rate injection test(s), the following shall be the new maximum surface pressure limit(s) while equipped with **injection** tubing:

Well No.		New Pressure Limit (psi)		Injection Interval (ft)	Pressure Gradient (psi/ft)
Belco No. 2	8/11/2011	880	water	2540 to 3680	0.35

This approval is based on the provision that the tubing size, packer setting depth and completion interval for the well(s) does not change. Any future requested pressure increase will require resubmission of additional data and/or a new step-rate test. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in the well(s). This approval is subject to your being in compliance with all other Division rules, including but not limited to Division Rule 19.15.5.9 NMAC.

The previous pressure increase, approved in administrative order IPI-406 dated September 19, 2011, is hereby rescinded with the approval of this order.

The Division Director may rescind any injection permit if it becomes apparent that the injected fluid is not being confined to the permitted disposal interval or is endangering any fresh water aquifer.

Sincerely,

DAVID R. CATANACH

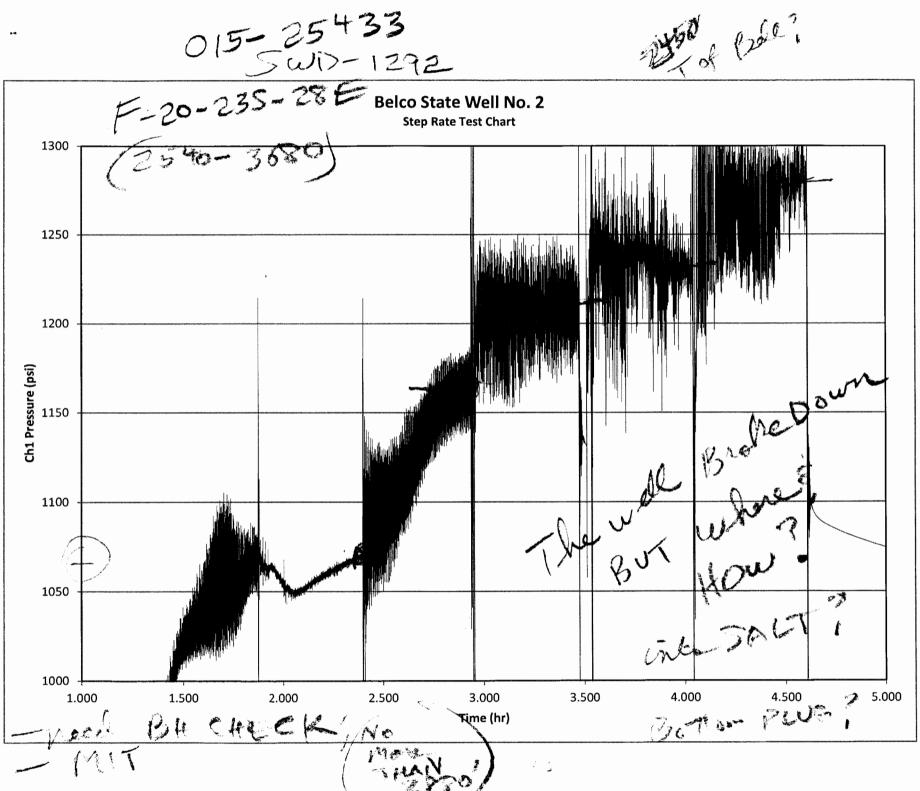
Director

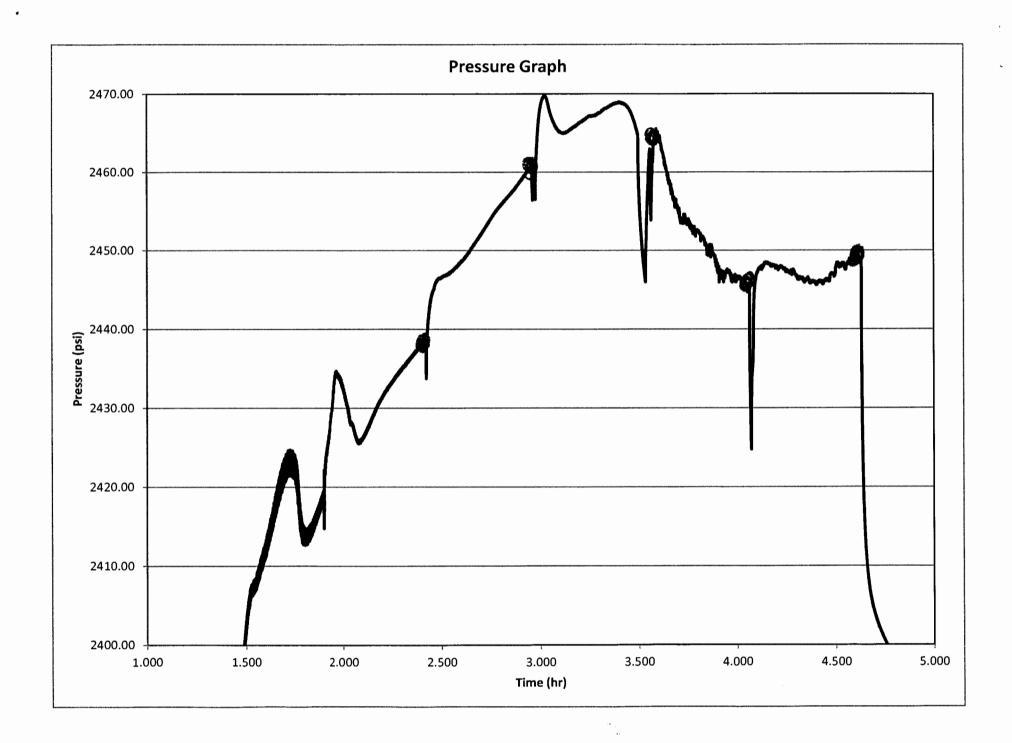
DRC/prg

cc: Oil Conservation Division – Artesia District Office State Land Office - Oil, Gas, and Minerals Division

Well File API 30-015-25433

of Cole?

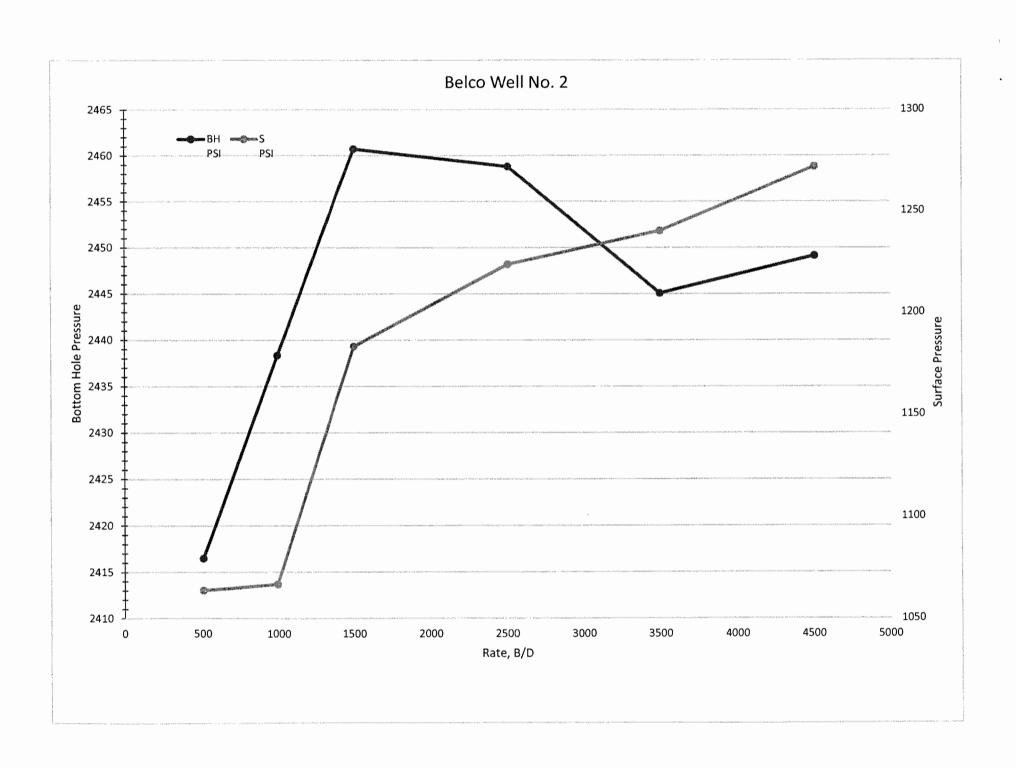






## STEP RATE TEST

	RATE B/D	Date	Time	BH PRESS	SURF. PRESS	Comments
Step 1	504	12/15/2015	9:59 AM	2416.46	1063.64	
Step 2	993.6	12/15/2015	5:32 AM	2438.31	1066.72	
Step 3	1497.6	12/15/2015	11:03 AM	2460.71	1183.22	
Step 4	2505.6	12/15/2015	11:37 AM	2458.8	1223.53	
Step 5	3499.2	12/15/2015	12:10 PM	2445.04	1240.05	
Step 6	4507.2	12/15/2015	12:43 PM	2449.11	1271.82	
Fall Off		12/15/2015	1:14 PM	2387.17	1071.03	
	Company:	Basic Energ	y Services	44.00	Recorded By:	M. Flores
	Well:	<b>Belco State</b>	#2			t to a
	Field:	Belco State			Truck Number:	95
	County:	Eddy	· (1)	W 1	District:	Levelland -
	State:	New Mexico				
					Test Type:	STEP RATE TESTS
<u> </u>	ubing Size:	2 7/9"	- 4	Medical Control		
	ople Depth:		igi.	18 (19 19 19 19 19 19 19 19 19 19 19 19 19 1		
	erforations:			The state of the s		
Ге						



### INJECTION WELL DATA SHEET

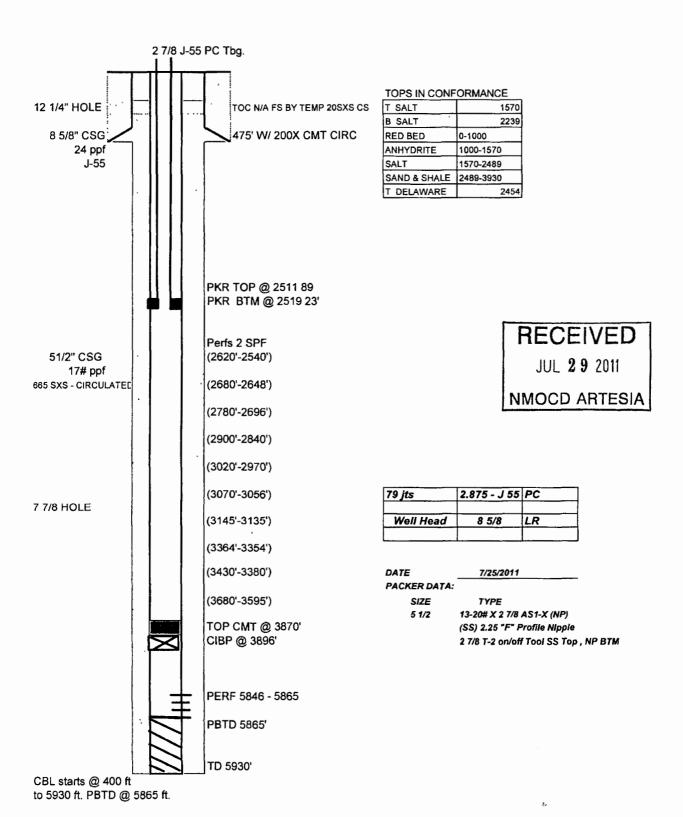
OPERATOR:	BASiC Energy Services						
WELL NAME & NUMBER: Belco State # 2		API # 300152543	33				
WELL LOCATION: 2310 FNL & 1980 FWL FOOTAGE LOCATION	F UNIT LETTER	20 SECTION	238 TOWNSHIP	<u>28E</u> RANGE			
WELLBORE SCHEMATIC	ONIT ESTIEN	WELL CONSTRUCTION DATA Surface Casing					
Pkr 5 /12 @ 2500 ft	Top of Cement: <u>Cir</u> Hole Size:N  Cemented with:	sx. to Surface 20sx to production sx.	t Method Determined te Casing  Casing Size:  or  Method Determined	ft³			
Perfs 2540 ft to 3680 ft  PBTD 5865 ft TD 5930 ft	Top of Cement: Cir.  Total Depth: 5930 ft	poz./780 pacesetter sx.  / CBL starts 400'  r. PBTD 5865 ft.  Injection	Method Determined  Interval t To 3680 ft. Per	ft³			

# BASIC ENERGY SERVICES LP

### BELCO ST. #2

API # 3001525433 2000 2310' FNL & 1980' FWL Unit F, Sec 20, T 23S, R 28E Eddy County

### WELL BORE DIAGRAM



	Submit 1 Copy To Appropriate District	State of New Me	xico	Form C-103				
	Office <u>District I</u> – (575) 393-6161	Energy, Minerals and Natur	ral Resources	Revised August 1, 2011				
	1625 N. French Dr., Hobbs, NM 88240			WELL API NO.				
,	<u>District II</u> – (575) 748-1283 F811 S. First St., Artesia, NM 88210	OIL CONSERVATION	DIVISION	3001525433  5. Indicate Type of Lease				
•	District III - (505) 334-6178	1220 South St. Fran	icis Dr.	STATE FEE				
	1000 Rio Brazos Rd., Aztec, NM 87410 District IV – (505) 476-3460	Santa Fe, NM 87	505	6. State Oil & Gas Lease No.				
	1220 S. St. Francis Dr., Santa Fe, NM	· .						
ſ	87505 SUNDRY NOTIC	CES AND REPORTS ON WELLS		7. Lease Name or Unit Agreement Name				
	(DO NOT USE THIS FORM FOR PROPOS	ALS TO DRILL OR TO DEEPEN OR PLU	JG BACK TO A	// Zease : tame or emerge				
	DIFFERENT RESERVOIR. USE "APPLICATION OF THE PROPOSALS.)	ATION FOR PERMIT" (FORM C-101) FO	OR SUCH	Belco State 8. Well Number #2 SWD				
1		ROPOSALS.) . Type of Well: Oil Well						
t	2. Name of Operator							
	Basic !	Energy Services LP		246368				
-	3. Address of Operator			10. Pool name or Wildcat				
.		x 10460 Midland Texas 79702		Delaware				
	4. Well Location							
	Unit LetterF:_2310							
	Section 20	Township 23 S Range 28		County Eddy				
		11. Elevation (Show whether DR.	RKB, RT, GR. etc.,					
Į								
	10 61 1 1		Carri	D of D				
•	12. Check A	ppropriate Box to Indicate N	ature of Notice,	Report or Other Data				
	NOTICE OF IN	TENTION TO	l SUB	SEQUENT REPORT OF:				
	PERFORM REMEDIAL WORK	PLUG AND ABANDON	REMEDIAL WOR					
	TEMPORARILY ABANDON	CHANGE PLANS	COMMENCE DRI	ILLING OPNS. P AND A				
	PULL OR ALTER CASING	MULTIPLE COMPL	CASING/CEMEN	T JOB 🔲				
	DOWNHOLE COMMINGLE							
	OTHER	-	071150					
-	OTHER:	ated appretions. (Clearly state all	OTHER:	d give pertinent dates, including estimated date				
				mpletions: Attach wellbore diagram of				
	proposed completion or reco		z. Toi Multiple Coi	impletions. Attach wendore diagram of				
		•		•				
	5/13/15 MI Frac tanks all fluids were			@ 650 psi continue to flow back.				
	5/15/15 Hobbs Anchors completed tir			LOSSO 'ODEN				
	5/15/15 RU SU over matting board m 5/18/15 Order 110 bbls 10# Quality E							
٠. '				//PKR Ready Hydro-Testers TIH with tbg.				
				i close BOP stab TIW shut in. SDFN				
	5/19/15 TOH with tubing make ready							
				ll clean. TOH with notched collar. Make ready				
				I J – off O/O tool circulated PKR fluid 3%				
	PKR set @ 2507.50° Top of valve	PKR. Btm. PKR @ 2515.95' pull	25 points over ND	BOP Landed tbg set slips installed master				
		ng with 13 bbls and psi to 2800# Po	OP. Closed Master	valve. NU pump truck to annulus psi to 500#				
•		Il equipment. Ready for MIT		- Land Control of the				
	Basic Energy Services Response	ectfully asks for a date and time at	NM OCD convenie	ence for Scheduled date and time to MIT well.				
	C. ID.							
•	Spud Date:	Rig Release Da	ite:					
	VI - I			11.1.6				
	I hereby certify that the information a	loove is true and complete to the bo	est of my knowledg	ge and bener.				
				•				
	SIGNATURE David H. Alvarado	TITLE SENM District F	luids Mgr.	DATE <u>5/14/15</u>				
,	Type or print name David H. Alvarad	do . E-mail address: david.alvai	ado@basicenergys	ervices.com PHONE: 575, 746, 2072				
	For State Use Only							
	APPROVED BY: RUMAN I	VI. 6	Minus 1	Garage also le				
	Conditions of Assemble (Section 1)	TITLE Com	pergner O	Fried DATE STUBIS				
,	Conditions of Approval (if any):							