

Submit 1 Copy To Appropriate District Office  
District I - (575) 393-6161  
1625 N. French Dr., Hobbs, NM 88240  
District II - (575) 748-1283  
811 S. First St., Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV - (505) 476-3460  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
Revised August 1, 2011

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO. 30-015-29179
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Pinnacle State
8. Well Number 15 SWD
9. OGRID Number 246289
10. Pool name or Wildcat Herradura Bend: Delaware East

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐

2. Name of Operator  
RKI Exploration & Production, LLC

3. Address of Operator  
210 Park Avenue, Suite 900, Oklahoma City, OK 73102

4. Well Location  
Unit Letter A : 990 feet from the North line and 990 feet from the East line  
Section 36 Township 22S Range 28E NMPM County Eddy

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
3152 feet GR

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐  
DOWNHOLE COMMINGLE ☐

OTHER: Convert to Saltwater Injection Well ☒

SUBSEQUENT REPORT OF:

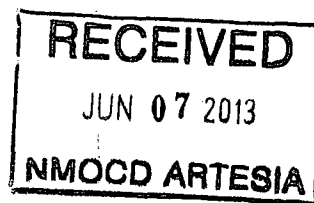
REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

RKI Exploration & Production, LLC proposes to convert the subject well into a saltwater injection well as detailed in the attached procedures guideline as well as wellbore schematic diagram.

MUST REQUEST SWD PERMIT BY  
C108 AND ADMINISTRATIVE APPLICATION  
SENT TO THE OCD-SANTA FE  
OFFICE. RF - 6/12/13



Spud Date: 9/30/1996

Rig Release Date: 10/10/1996

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

SIGNATURE Charles K. Ahn TITLE EH&S/Regulatory Manager DATE 6/05/2012

Type or print name Charles K. Ahn E-mail address: cahn@rkixp.com PHONE: 405-996-5771  
For State Use Only

APPROVED BY: AR Dade TITLE Dist # Supervisor DATE 6/12/13  
Conditions of Approval (if any):

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

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DISTRICT IV  
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Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office  
☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number <b>30-015-29179</b>	Pool Code <b>30670</b>	Pool Name <b>Herradura Bend; Delaware East</b>
Property Code	Property Name <b>PINNACLE STATE</b>	Well Number <b>15 SWD</b>
OGRID No. <b>246289</b>	Operator Name <b>RKI EXPLORATION &amp; PRODUCTION</b>	Elevation <b>3152'</b>

**Surface Location**

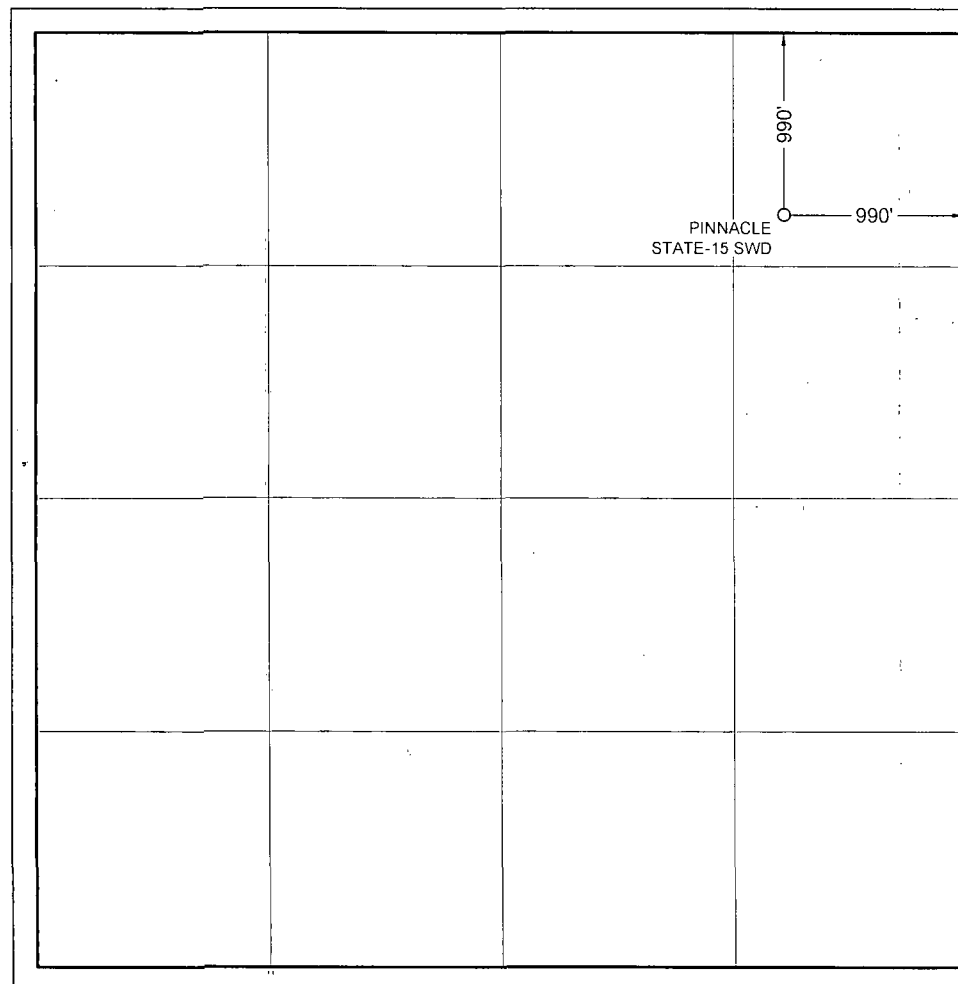
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>A</b>	<b>36</b>	<b>22 S</b>	<b>28 E</b>		<b>990</b>	<b>NORTH</b>	<b>990</b>	<b>EAST</b>	<b>EDDY</b>

**Bottom Hole Location If Different From Surface**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres <b>40</b>	Joint or Infill	Consolidated Code	Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



**OPERATOR CERTIFICATION**

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Charles K. Ahn* 6/05/2013  
Signature Date

Charles K. Ahn  
Print Name

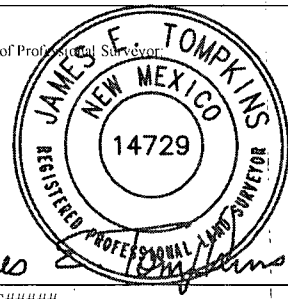
cahn@rkixp.com  
E-mail Address

**SURVEYORS CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

May 30, 2013  
Date of Survey

Signature and Seal of Professional Surveyor



Job No. WTC#####  
JAMES E. TOMPKINS 14729  
Certificate Number

# RKI Exploration & Production, LLC

## Pinnacle State 15 SWD

### Saltwater Injection Well Conversion Procedure

East Herradura Bend

Section 36 T22S R28E  
Eddy County, NM

API # 30-015-29179  
Property No. 200935

**Spud Date:** 9/30/96  
**Comp Date:** 11/1/96

**Producing Formations:** Delaware 5,342'-6,116' OA

**KB Elev:** 3,167'  
**GL Elev:** 3,152'  
**TD:** 6,475'  
**PBTD:** 6,427'  
**Marker Joint:** DV Tool @ 3,515'

#### CASING SUMMARY:

Safety Factor = 80% of new applied to burst, collapse and tension parameters in table.

Size	Depth (ft)	Weight (#/ft)	Grade psi	Connection Type	Capacity (bbls/ft)	ID (in)	Drift (in)	Burst (psi)	Collapse (psi)	Tension (lbs)
13 3/8"	385'	54.5	J-55	ST&C	0.1546	12.615	12.459	2,184	905	195,000
8 5/8"	2,750'	40	J-55	LT&C	0.0637	8.097	8.599	2,360	1,100	448,000
5 1/2"	6,475'	15.5	J-55	LT&C	0.0238	4.950	4.825	3,850	3,250	174,000

Surface: 13 3/8" 54.5# J-55 STC: 0'-385'- TOC @ surface  
Intermediate: 8 5/8" 24# J-55 LTC: 0' - 2,750'- TOC @ surface  
Production: 5 1/2" 15.5# J-55 LTC: 0' - 6,475' - DV Tool @ 3,515'; TOC @ 2,950' per report

**COMPLETION HISTORY TO DATE:** Delaware completed 5,342'-6,116' (staged frac'd 10/96). Well on PU/rod pump production.

**OBJECTIVE:** Convert wellbore into SWD.

**NOTE:** Maximum allowable surface pressure for Delaware sand treatments down 5 1/2" 15.5# J-55 is 3,750 psi. Test surface lines & frac pumps to 4,500 psi.

Make sure frac company installs a pressure transducer and a manual gauge on the annulus line so that the annulus pressure is monitored and recorded during the acid stimulation.

**RKI REQUIRES THAT HARD HATS, STEEL TOE BOOTS, FIRE RETARDANT CLOTHING, AND SAFETY GLASSES BE WORN ON LOCATION**

**HOLD SAFETY MEETING PRIOR TO COMMENCING PERFORATING, WIRE LINE AND PUMPING OPERATIONS**

**NO IGNITION SOURCES WITHIN 100 FT OF THE WELLHEAD, FLOWBACK TANKS OR MANIFOLD.**

#### **PROCEDURE:**

- 1) MI RU Service Unit. Deliver and set 4 clean frac tanks and fill with 480 bbls. produced water in each.

- 2) HO PU unit. Unseat pump. Hot oil tubing w/ 30 bbls. oil. ROH, LD rods, pump.
- 3) ND WH, NU 5K# BOP.
- 4) MI RU Tuboscope. Release TAC, TOH and inspect tubing. RD MO Tuboscope. Replace tubing as necessary to have 3,300' tested 2 7/8" 6.5# J-55 EUE onsite.
- 5) MI RU wireline unit. RIH w/ 4.75" JB/GR to 5,325'. RIH and set 5-1/2" CIBP @ 5,300' +/- (**DO NOT SET IN COLLAR**).
- 6) MI RU pump truck. Test plug to 2,000 psi for 30 minutes. RD MO pump truck.
- 7) Dump bail 2 sx cement on top of plug. RIH w/ 3-1/8" HSC gun loaded with 22.7 gram Titan EXP 3323-301T charges, 0.40 EHD, 35.60" pen and 60° phasing and perforate sand as listed below. (**NOTE: Perforations correlated to Schlumberger Litho-Density/Comp Neutron dated 10/11/96**). POOH, ensure all shots fired. RD MO wireline.

#### Upper Delaware sands (3,312'-3,546' OA) Perforations

Set	Upper	Lower	Feet	SPF	Shots	Phasing
1	3,532'	3,546'	14	2	28	60°
2	3,430'	3,460'	30	2	60	60°
3	3,404'	3,418'	14	2	28	60°
4	3,312'	3,326'	14	2	28	60°
TOTAL			72		144	60°

- 8) TIH w/ 2-7/8" x 5-1/2" AS-1X packer, 3,100' 2 7/8" tubing. Set packer @ 3,100' w/ 15K# compression.
- 9) MI RU stimulation company. Pressure test lines/pumps to 4,500 psi. Load backside w/ 2% KCL water and pressure to 500 psi. Acid stimulate Delaware sand with 10,000 gals 7.5% NE FE acid w/ 5 gpt surface tension reducer + 1,800 bbls produced water + 126 ct. B.S. (1.3 SG) via tubing in the following stages:

#### Delaware sand Acid Treatment Schedule

Stage	Fluid Type	Stage Vol (gal)	Proppant/Fluid Type	Stage (lbs)	Cum Prop. (lbs)	Rate (BPM)
1	Acid	1,000	7 1/2% NE FE			5-7
2	Produced Water	6,500	Produced Water			8-10
3	Produced Water	1,000	Stage flush + 14 BS			8-10
4	Repeat steps 1-3	8,500				8-10
5	Repeat steps 1-3	8,500				8-10
6	Repeat steps 1-3	8,500				8-10
7	Repeat steps 1-3	8,500				8-10
8	Repeat steps 1-3	8,500				8-10
9	Repeat steps 1-3	8,500				8-10
10	Repeat steps 1-3	8,500				8-10
11	Repeat steps 1-3	8,500				8-10
12	Repeat steps 1-2	7,500				8-10

- 10) SD, Record ISIP, 5 min SIP, 10 SIP, 15 min SIP. Surge BS. SI well in for 4 hours.
- 11) Install flow valve/choke. Open well, flow back until dead.
- 12) Release packer. TIH thru perforations to knock any balls off perforations.

- 13) TOH, LD tubing and packer.
- 14) Deliver, unload and tally 3,300' 3-½" 9.3# J-55 EUE tubing w/ turned down collars and lined with Tuboscope TK-15 lining, lined 2-7/8" x 5-½" lined AS-1X packer, lined XO, 3,250' lined 3-½" 9.3# J-55 EUE tubing with turned down collars.
- 15) MI RU pump truck. Pump/circulate 40 BFW w/ packer fluid down casing.
- 16) Set packer @ 3,250' +/- w/ 12# compression.
- 17) ND BOP, NU wellhead.
- 18) Pressure test annulus and packer to 1,000 psi for 30 minutes. RD MO pump truck.
- 19) RD MO Service Unit.
- 20) Install surface equipment.
- 21) Run MIT. Turn on well for injection.

**RKI Contact List:**

<b>RKI</b>	<b>Title</b>	<b>Office</b>	<b>Cell</b>
Brent Umberham	Manager-Drlg & Prod Ops	405-996-5748	405-623-5080
Gene Thompson	Area Superintendent	575-885-1313	817-908-9219
Ken Fairchild	Production Manager	405-996-5764	469-693-6051
Paul Munding	Production Engineer	405-987-2140	405-820-2825
Jaime McAlpine	Engineering Consultant	405-996-5741	405-850-6685

**Emergency Contacts – New Mexico:**

Hospital: Carlsbad Medical Center (575) 887-4100  
2430 W. Pierce St., Carlsbad, NM 88220

Sheriff's Office: Lea County Sheriff Dept (575) 396-3611  
Eddy County Sheriff Dept (575) 887-7551

**Emergency Contacts – Texas:**

Hospital: Reeves County Hospital (432) 447-3551  
2323 Texas St, Pecos TX 79772

Sheriff's Office: Reeves County Sheriff Dept (432) 445-4901  
Loving County Sheriff Dept (432) 377-2411

# RKI Exploration and Production , LLC

## Pinnacle State 15

Section 36-22S-28E

Eddy County, New Mexico

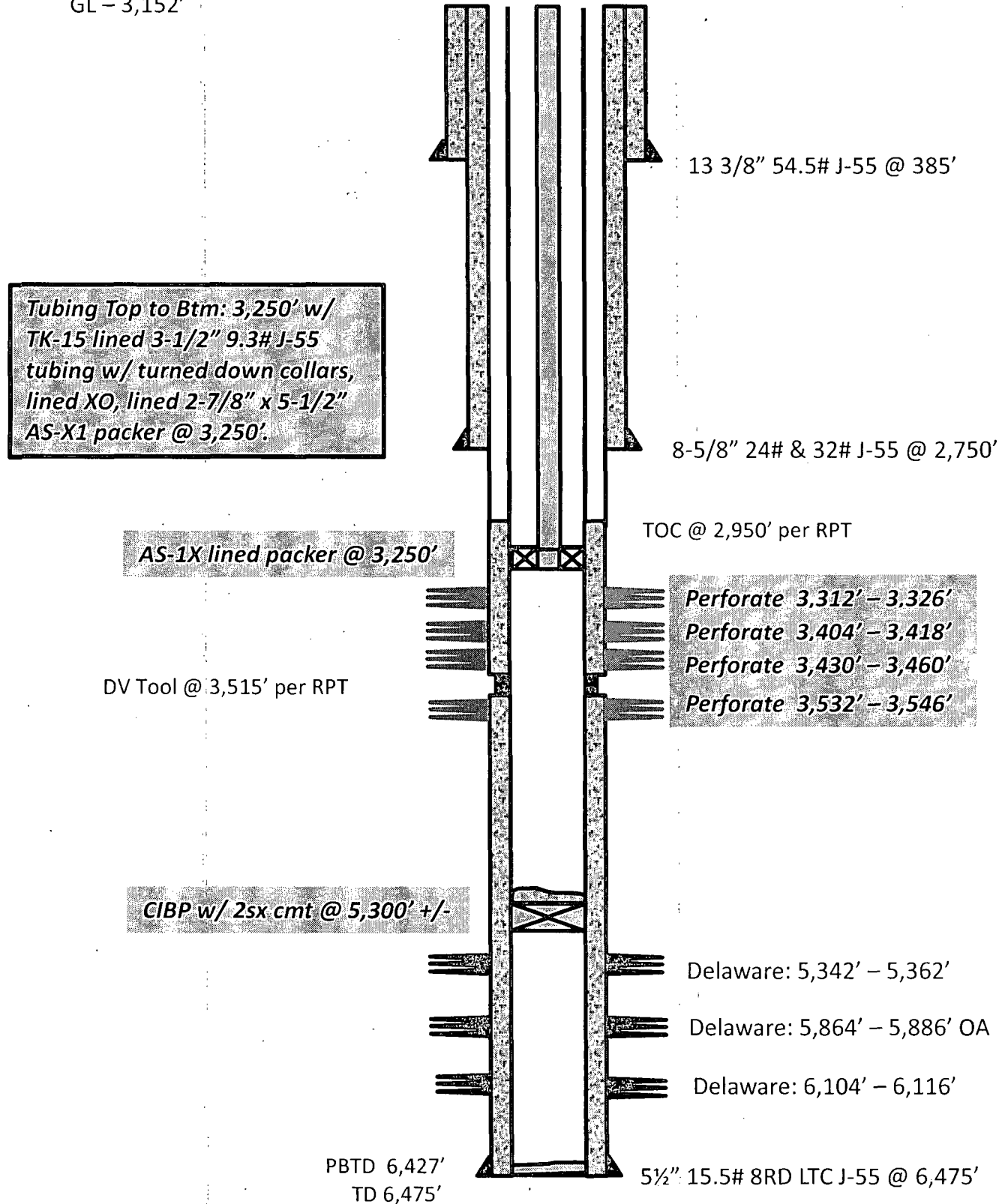
API No. 30-015-29179

**PROPOSED**

KB - 3,167'

GL - 3,152'

4/23/13;JLM



# RKI Exploration and Production, LLC

## Pinnacle State 15

Section 36-22S-28E

Eddy County, New Mexico

API No. 30-015-29179

**CURRENT**

KB - 3,167'

GL - 3,152'

3/28/13; BAB

**Tubing Top to Btm:** 166 Jts 2-7/8" 6.5# J-55 Tbg, 2-7/8" X 5-1/2" TAC, 29 Jts Tbg, SN, 2-7/8" X 4' Perf Sub, 2-7/8" X 32' MA. TAC @ 5,223', SN @ 6,162', EOT @ 6,198'.

**Rod Detail:** Top to Btm: 26' X 1-3/4" PR w/ 16' X 1-1/2" liner, 8' & 6' 7/8" Pony Rods, 81 ct 1" WCN Rods, 68 ct 7/8" D-90 Rods, 83 ct 3/4" D-90 Rods, 12 ct 7/8" D-90 Rods, 2-1/2" x 1-1/4" x 20' RHBC-HVR Pump w/ 6' GA

