

OIL & GAS CONSERVATION COMMISSION
— MINUTES OF MEETING / OCTOBER 18, 2013 —
STEVEN L RAUZI, OIL & GAS ADMINISTRATOR

NOTICE OF COMBINED PUBLIC MEETING AND POSSIBLE EXECUTIVE SESSION

OIL AND GAS CONSERVATION COMMISSION

Pursuant to A.R.S. § 38-431.02, notice is hereby given to the members of the Oil and Gas Conservation Commission and to the general public that the Oil and Gas Conservation Commission will hold a meeting open to the public on October 18, 2013, at 10:00 a.m. in Room 321 of the State Land Department Building located at 1616 West Adams Street, Phoenix, Arizona 85007.

The agenda for the meeting is as follows:

1. Call to Order
2. Approval of Minutes of Meeting of July 19, 2013
3. Conflicts of interest
4. Report of Oil & Gas Administrator about new permits and drilling activity
5. Status of Triomphe Energy #1 well
6. Status of the Kinder Morgan CO₂ project between St Johns and Springerville
7. Call to the public: This is the time for the public to comment. Members of the Commission may not discuss items that are not on the agenda. Therefore, action taken as a result of public comment will be limited to directing staff to study the matter or scheduling the matter for further discussion and decision at a later date.
8. Announcements
9. Adjournment

Members of the Oil and Gas Conservation Commission will attend either in person or by telephone conference call.

The Oil and Gas Conservation Commission may vote to go into Executive Session, pursuant to A.R.S. § 38-431.03(A)(3) or (4), which will not be open to the public, to consult with its attorney and receive legal advice with respect to any regular agenda item listed on this agenda.

A copy of the agenda background material provided to Commission members (with the exception of material relating to possible executive sessions) is available for public inspection at the Oil and Gas Administrator's office, 416 West Congress, Suite 100, Tucson, Arizona 85701.

The public may be afforded an opportunity to comment on any item on the agenda; however, at the beginning of the meeting, the Commission may vote to set up a time limit on individual comments.

Dated this 10th day of October 2013

OIL AND GAS CONSERVATION COMMISSION



Steven L. Rauzi
Oil and Gas Program Administrator

Persons with a disability may request a reasonable accommodation such as a sign language interpreter, by contacting Steve Rauzi at (520) 770-3500. Requests should be made as early as possible to allow time to arrange the accommodation. This document is available in alternative formats by contacting Steve Rauzi at (520) 770-3500.

OIL AND GAS CONSERVATION COMMISSION

416 West Congress #100

Tucson, Arizona 85701

Minutes of Meeting

July 19, 2013

Present:

Dr. J. Dale Nations, Chairman

Mr. Robert L. Wagner, Vice-chairman

Mr. Stephen R. Cooper, Member

Mr. Frank Thorwald, Member

Mr. Steven L. Rauzi, Oil and Gas Program Administrator

Dr. Nations, Chairman, called the regular Commission Meeting of July 19 to order at 10:00 a.m. in Room 321, State Land Department Building in Phoenix, Arizona.

APPROVAL OF THE MINUTES OF THE MEETING OF APRIL 19, 2013

Mr. Thorwald moved, seconded by Mr. Wagner:

THAT THE MINUTES OF THE MEETING OF APRIL 19, 2013, BE ACCEPTED
AS PRESENTED

Motion carried unanimously.

CONFLICTS OF INTEREST

None

REPORT OF THE OIL AND GAS ADMINISTRATOR

The activity report of Mr. Rauzi was sent to the Commissioners and has been made a part of these minutes. Mr. Rauzi reported that three new permits were issued and four wells were drilled since the April 2013 meeting. He reported that Passport Potash and NHZ Potash each drilled a well in the potash area and that Kinder Morgan drilled two wells in the St. Johns CO₂ area. He noted that the name of the HN2 well was the Mine Shaft Core Well #1, which was drilled to obtain information relative to eventual construction of a mining shaft.

REVIEW OF DRILLING PERFORMANCE BONDS

Mr. Rauzi reviewed the status of bonds currently on file with the Oil and Gas Conservation Commission. He reported two changes from the July 2012 bond list: (1) the American Fuels bond was dropped because the State Treasurer had no record of the bond, which was likely transferred to the Trustee for Bankruptcy in late 1978 or early 1979; and (2) that the Ridgeway bond was released back to Ridgeway because that bond was replaced by the Kinder Morgan bond.

**STATUS OF KINDER MORGAN DRILLING PROGRAM BETWEEN ST JOHNS AND
SPRINGERVILLE INCLUDING POSSIBLE REPORT FROM KINDER MORGAN**

Mr. White reported that Kinder Morgan drilled two new wells in the St Johns CO₂ area. He noted that results so far were very positive and that Kinder Morgan planned to permit more wells and start some construction later this year.

CALL TO THE PUBLIC

Mr. Bonanno reported that Arizona Oil and Gas Inc., planned to drill three wells north of Douglas by September. He showed the Commissioners a map depicting their interpretation of the oil and gas potential where the wells would be drilled.

ANNOUNCEMENTS

The Commission scheduled its next meeting at 10:00 a.m. on October 18, 2013, in room 321 at the State Land Department Building in Phoenix.

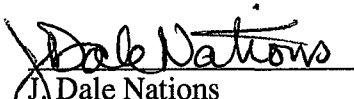
ADJOURNMENT

Mr. Wagner moved, seconded by Mr. Thorwald:

THAT THE MEETING BE ADJOURNED

Motion carried unanimously. Time of adjournment was 10:15 a.m.

APPROVED


J. Dale Nations
Chairman

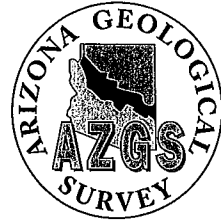
GUESTS IN ATTENDANCE

Mr. Carmon Bonanno	Arizona Oil & Gas Inc.
Mr. Curtis Cox	Assistant Attorney General
Mr. Joe Dixon	State Land Department
Ms. Terri Luck	Vertex
Ms. Rebecca Price	Vertex
Mr. Thomas White	Ridgeway Arizona Oil Corporation



Janice K. Brewer
Governor


State of Arizona
Arizona Geological Survey
416 W. Congress, Suite 100
Tucson, Arizona 85701
(520) 770-3500



M. Lee Allison, Ph.D., R.G.
Director and State Geologist

October 11, 2013

To: Oil and Gas Conservation Commissioners

From:  Steven L. Rauzi, Oil and Gas Administrator

Re: Report about permits and drilling activity for the October 18, 2013, Meeting

Thirty six new drilling permits were issued and 18 wells were drilled since your last meeting on July 19. American West Potash drilled the 18 stratigraphic wells for potash information on their land holdings east of the Petrified Forest National Park.

I completed an inspection of both the Plains LPG storage facility near Luke and the Enterprise Products LPG storage facility near Holbrook. All wellhead valves, pneumatic controls, and emergency shut down and flare systems were in good condition. Plains LPG operates three wells with a total sonar capacity of 166 million gallons. Enterprise operates 11 wells with a total sonar capacity of 93 million gallons.

The New Mexico Geological Society Annual Field Conference visited Petrified Forest National Park the day after I inspected the LPG storage facility near Holbrook. There were about 135 participants in the field trip and I presented a short talk to the group about the current potash drilling surrounding the park. The talk was well received.

Kinder Morgan plans to provide a status update on its CO2 project.

I notified Triomphe Energy on October 1 that its temporary abandonment would expire at the end of October and to prepare to document why they would need to extend the amount of time to continue work on the well or submit paper work to plug and abandon the well pursuant to A.A.C. R12-7-125. Triomphe Energy responded today, October 10, that they would inform me of their desires very soon. Triomphe may request an extension of temporary abandonment at the October meeting. The Commission extended the confidentiality of the Triomphe well records through June 2014 in its April 2013 meeting. I have attached a summary of Commission motions regarding the Triomphe well.

Steve Rauzi

Subject: Triomphe #1 Permit 1095 Sundry Notice Temporary Shut-in Status

From: T R Clement [mailto:trclement@triompheenergy.com]
Sent: Friday, October 11, 2013 11:56 AM
To: Steve Rauzi
Subject: Re: Triomphe #1 Permit 1095 Sundry Notice Temporary Shut-in Status

Thank you Steve got your prompt reply. Yes, June 2014.

Todd R. Clement
PO Box 911900
St. George, UT 84791

On Oct 11, 2013, at 9:46 AM, Steve Rauzi <steve.rauzi@azgs.az.gov> wrote:

So how much time are you asking for? Your confidentiality expires June 2014. Are you asking to extend TA through June 2014?

From: Todd Clement [mailto:trclement@triompheenergy.com]
Sent: Thursday, October 10, 2013 11:16 PM
To: Steve Rauzi
Subject: Triomphe #1 Permit 1095 Sundry Notice Temporary Shut-in Status

Dear Mr. Rauzi,

Thank you for your efforts and timely responses to our field needs. Triomphe Energy, LLC was granted a temporary shut-in status from the Arizona Oil and Gas Conservation Commission for the future beneficial purpose of drilling a lateral extension to the Triomphe #1 well. After much preparatory effort and expense we have determined not to proceed with a lateral extension but instead submit the attached sundry notice and well report for the future beneficial purpose of the Triomphe #1 well. Please note the following attachment:

- Sundry Notices and Reports on Wells Form

Estimated start date is October 30, 2013. Triomphe Energy, LLC seeks approval of the attached Sundry Notice.

Respectfully,

Todd R. Clement
Manager
Triomphe Energy, LLC
Tel: 800-503-7981 ext. 701
Cell: 208-313-5908
Fax: 800-503-7981

AZOGCC Motions regarding Triomphe #1 well

April 19, 2013 Meeting

REQUEST BY TRIOMPHE TO EXTEND CONFIDENTIALITY IN TRIOMPHE 1 WELL (PERMIT 1095)

Mr. Rauzi reported that Triomphe requested an extension of confidentiality for its Triomphe #1 well. Triomphe's written request stated that disclosure of information would harm its competitive position while its project was in its initial stages including pursuit of nearby land holdings. He recommended approval of an extension. After discussing the continuing work and activity at the well,

Mr. Thorwald moved, seconded by Mr. Wagner:

TO GRANT TRIOMPHE ENERGY'S REQUEST TO EXTEND CONFIDENTIAL STATUS FOR ONE YEAR
FROM JUNE 2013

Motion carried unanimously.

October 19, 2012 Meeting

TRIOMPHE ENERGY REQUEST TO DRILL A LATERAL EXTENSION IN ITS TRIOMPHE #1 FEE (PERMIT 1095) IN SECTION 27, TOWNSHIP 20 NORTH, RANGE 21 EAST, NAVAJO COUNTY

Mr. Rauzi reported that Triomphe Energy submitted a written request to drill a lateral extension in its Triomphe #1. He indicated that the request and planned lateral extension were in compliance with the requirements of A.A.C. R12-7-115(B) and R12-7-107(D) and recommended approval.

Mr. Cooper asked about protection of aquifers. Mr. Rauzi noted that three cemented strings of casing to the proposed kickoff point would protect the Coconino aquifer in this area.

Mr. Thorwald moved, seconded by Mr. Cooper:

TO APPROVE THE LATERAL EXTENSION IN THE TRIOMPHE #1

Motion carried unanimously.

TRIOMPHE ENERGY REQUEST TO TEMPORARILY ABANDON ITS TRIOMPHE #1 WELL

Mr. Rauzi reported that Triomphe Energy submitted a written request to temporarily abandon its Triomphe #1 well because it could not drill the lateral extension until about May 2013 because of limited access to qualified service providers who can or are available to provide these types of services to this remote area. He reviewed the mechanical condition and integrity of the hole, indicated that the request was in compliance with A.A.C. R12-7-125(B), and recommended approval of temporary abandonment for one year.

Mr. Cooper moved, seconded by Mr. Thorwald:

TO GRANT TEMPORARY ABANDONMENT FOR ONE YEAR TO THE TRIOMPHE ENERGY #1 WELL

Motion carried unanimously.

A.A.C. R12-7-125. Temporarily Abandoned and Shut-in Wells

- A.** If drilling, injection, or production operations at a well are suspended, or have been suspended for 60 days, an operator shall plug the well under R12-7-127 unless the Commission permits the well to be temporarily abandoned or shut-in. The Commission shall not classify a well as shut-in until the operator submits a completion report under R12-7-121.
- B.** An operator may temporarily abandon or shut-in a well for up to 5 years if the operator demonstrates to a quorum of the Commission a future beneficial use of the well and submits a Sundry Notice to the Commission containing the following information:

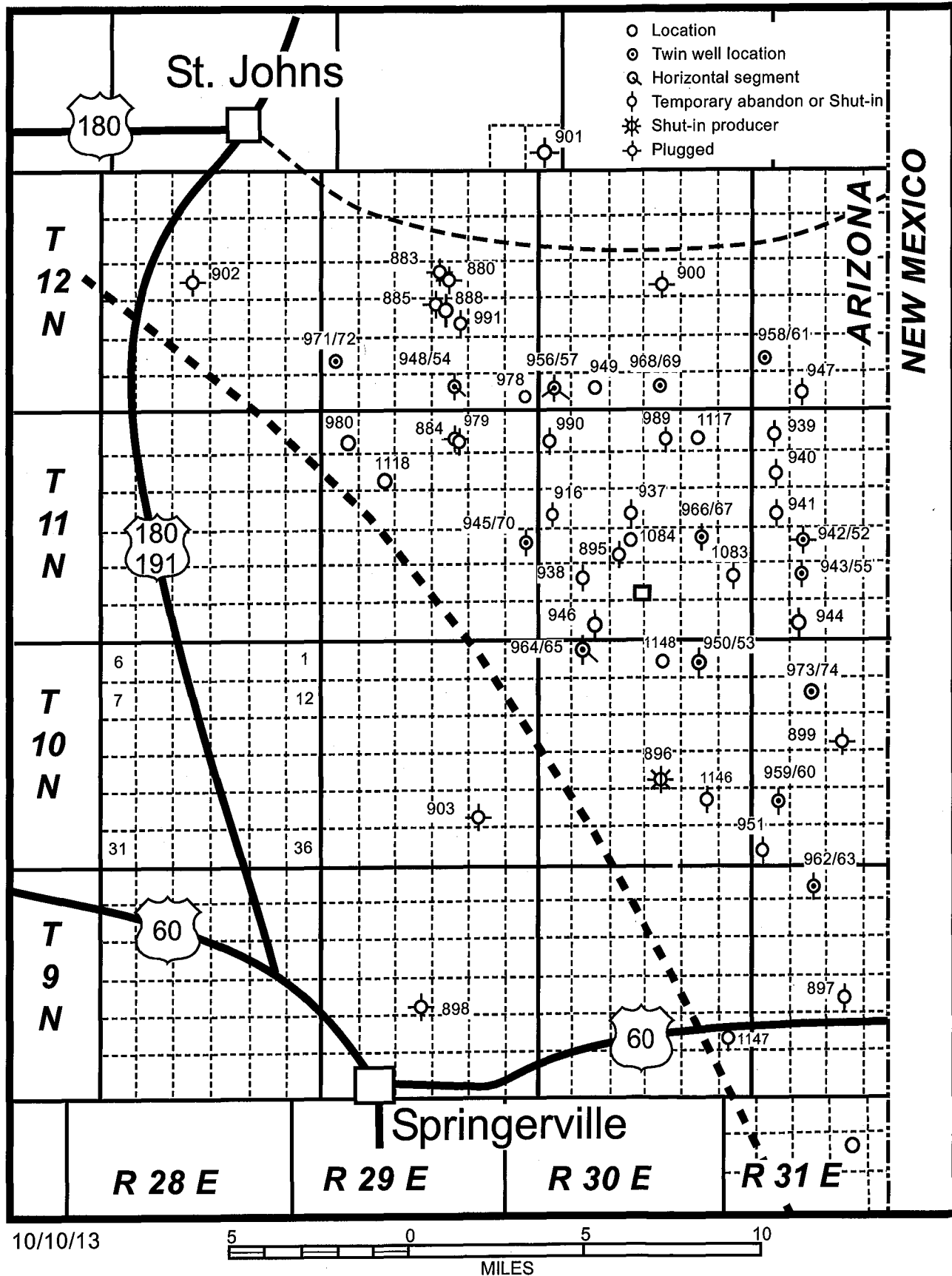
 - 1. Evidence of casing integrity as required in R12-7-112 including a complete description of the current casing, cementing, and perforation record of the well;
 - 2. The stimulation and cement squeeze record and complete data on the results of any well tests performed to date; and
 - 3. All other well data required in R12-7-121(A).
- C.** Before an approved time-frame for a temporarily abandoned or shut-in well expires, the operator shall return the well to beneficial use under a plan approved by the Commission, permanently plug and abandon the well, or apply for an extension to temporarily abandon or shut-in the well. If the integrity of the well casing is in question, the Commission may require the operator to:

 - 1. Prove casing integrity in accordance with R12-7-112;
 - 2. Plug any well that fails to meet the casing integrity required by R12-7-112; and
 - 3. Re-test the well in accordance with R12-7-150 to continue shut-in status.
- D.** An operator shall ensure that no work begins on a temporarily abandoned or shut-in well until approved by the Commission. The operator shall give at least 24 hours' notice to the Commission before any work begins. Within 15 days of completing the proposed work, the operator shall file a written report with the Commission fully describing the work performed including a copy of all test rates, pressures, and fluid analyses.

Historical Note

Adopted effective January 2, 1996 (Supp. 96-1). Amended by final rulemaking at 6 A.A.R. 4827, effective December 7, 2000 (Supp. 00-4).

Kinder Morgan CO2 Company Wells



Location and status of Kinder Morgan wells in east-central Arizona

<u>Permit</u>	<u>Well</u>	<u>Location Sec-Twp-Rge</u>	<u>Total Depth</u>	<u>Status and comment</u>
880	1 Plateau Cattle	ne sw 15-12n-29e	2431 ft	Drilled 8/1994, plugged 9/1997
883	1A Plateau Cattle	ne sw 15-12n-29e	220 ft	Drilled 11/1994, plugged 11/1997
884	3-1 State	ne se 3-11n-29e	1813 ft	Drilled 10/1995, plugged 9/2004
885	22-1 State	nw nw 22-12n-29e	218 ft	Drilled 8/1995, plugged 8/1997
888	22-1X State	se nw 22-12n-29e	2149 ft	Drilled 6/1997, shut-in 6/1997
890	35-1 State	ne sw 35-12n-29e	not drilled	Permit expired 4/1997
891	10-1 State	sw ne 10-11n-29e	not drilled	Permit expired 4/1997
892	11-1 State	se nw 11-11n-29e	not drilled	Permit expired 4/1997
893	2-1 State	se nw 2-11n-29e	not drilled	Permit expired 4/1997
895	11-21 State	ne sw 21-11n-30e	2410 ft	Drilled 3/1997, shut-in / app to plug
896	10-22 State	sw sw 22-10n-30e	2265 ft	Drilled 7/2002; completed, shut-in 3/2004
897	9-21 State	sw ne 21-9n-31e	2686 ft	Drilled 3/1997, shut-in / app to plug
898	9-22-29 State	sw se 22-9n-29e	3180 ft	Drilled 4/1997, plugged 2/2004
899	10-16-31 State	ne sw 16-10n-31e	2728 ft	Drilled 5/1997, plugged 2/2004
900	12-15-30 State	ne sw 15-12n-30e	2603 ft	Drilled 5/1997, plugged 7/2008
901	13-36-29 State	sw ne 36-13n-29e	2454 ft	Drilled 5/1997, plugged 5/1997
902	12-16-28 State	nw ne 16-12n-28e	2280 ft	Drilled 5/1997, plugged 1/2005
903	10-26-29 State	nw sw 26-10n-29e	3200 ft	Drilled 5/1997, plugged 1/2000
904	15-28-29 State	ne nw 28-15n-29e	2410 ft	Drilled 6/1997, plugged 6/1997
915	11-33 State	ne sw 33-11n-30e	not drilled	Permit expired 10/2004
916	11-18 State	c sw 18-11n-30e	2535 ft	Drilled 5/2004, temporarily abandoned
917	10-13 State	ne sw 13-10n-30e	not drilled	Permit expired 10/2004
937	11-16-30 State	nw se 16-11n-30e	2377 ft	Drilled 3/2007, shut-in
938	11-29-30 State	se nw 29-11n-30e	1906 ft	Drilled 2/2007, shut-in
939	11-06-31 State	nw se 06-11n-31e	2711 ft	Drilled 4/2007, shut-in
940	11-07-31 State	nw se 07-11n-31e	1885 ft	Drilled 4/2007, temporarily abandoned
941	11-18-31 State	nw se 18-11n-31e	2035 ft	Drilled 4/2007, temporarily abandoned
942	11-20-31 State	se nw 20-11n-31e	1934 ft	Drilled 5/2007, plugged 2/2008
943	11-29-31 State	se nw 29-11n-31e	2850 ft	Drilled 5/2007, shut-in
944	11-32-31 State	ne sw 32-11n-31e	2900 ft	Drilled 5/2007, temporarily abandoned
945	11-24-29 State	sw ne 24-11n-29e	1906 ft	Drilled 2/2007, shut-in
946	11-32-30 State	c se 32-11n-30e	1690 ft	Drilled 3/2007, temporarily abandoned
947	12-32-31 State	ne sw 32-12n-31e	85 ft	Drilled 5/2007, temporarily abandoned
948	12-34-29 State	nw ne 34-12n-29e	1140 ft	Drilled 2/2008, plugged 2/2008, blow out
949	12-32-30 State	sw ne 32-12n-30e	not drilled	Permit expired 7/2008
950	10-02-30 State	sw ne 02-10n-30e	2740 ft	Drilled 2/2008, temporarily abandoned
951	10-31-31 State	nw sw 31-10n-31e	2950 ft	Drilled 3/2013, temporarily abandoned
952	11-20-31x State	se nw 20-11n-31e	not drilled	Permit expired 7/2008
953	10-02-30x State	sw ne 02-10n-30e	1899 ft	Drilled 2/2008, temporarily abandoned
954	12-34-29x State	nw ne 34-12n-29e	3048 ft	Drilled 2/2008, shut-in
955	11-29-31x State	se nw 29-11n-31e	1909 ft	Drilled 3/2008, temporarily abandoned
956	12-31-30 State	se nw 31-12n-30e	4202 ft	Drilled 3/2008, temporarily abandoned
957	12-31-30x State	se nw 31-12n-30e	2622 ft	Drilled 3/2008, temporarily abandoned
958	12-30-31 State	sw sw 30-12n-31e	not drilled	Permit expired 8/2008
959	10-29-31 State	sw ne 29-10n-31e	3007 ft	Drilled 3/2008, temporarily abandoned
960	10-29-31x State	sw ne 29-10n-31e	not drilled	Permit expired 8/2008
961	12-30-31x State	sw sw 30-12n-31e	not drilled	Permit expired 9/2008
962	09-05-31 State	nw se 05-09n-31e	122 ft	Drilled 4/2008, temporarily abandoned
963	09-05-31x State	nw se 05-09n-31e	2969 ft	Drilled 4/2008, temporarily abandoned
964	10-05-30 State	nw nw 05-10n-30e	3813 ft	Drilled 11/2012, temporarily abandoned
965	10-05-30x State	nw nw 05-10n-30e	not drilled	Permit expired 9/2008
966	11-23-30 State	nw ne 23-11n-30e	2550 ft	Drilled 4/2008, shut-in
967	11-23-30x State	nw ne 23-11n-30e	not drilled	Permit expired 9/2008
968	12-34-30 State	se nw 34-12n-30e	not drilled	Permit expired 12/2008
969	12-34-30x State	se nw 34-12n-30e	not drilled	Permit expired 12/2008
970	11-24-29x State	sw ne 24-11n-29e	2137 ft	Drilled 4/2008, temporarily abandoned
971	12-30-29 State	ne sw 30-12n-29e	not drilled	Permit expired 1/2013
972	12-30-29x State	ne sw 30-12n-29e	not drilled	Permit expired 1/10/2009
973	10-08-31 State	sw ne 08-10n-31e	not drilled	Permit expired 2/14/2009
974	10-08-31x State	sw ne 08-10n-31e	not drilled	Permit expired 2/14/2009
978	12-36-29 State	nw sw 36-12n-29e	not drilled	Permit expired 8/13/2009
979	11-03-29x State	ne se 03-11n-29e	1670 ft	Drilled 11/2010, temporarily abandoned
980	11-06-29 State	se se 06-11n-29e	not drilled	Permit expired 2/13/2011
989	11-03-30 Prize	n2 se 03-11n-30e	2600 ft	Drilled 11/2012, temporarily abandoned
990	11-06-30 State	ne sw 06-11n-30e	1788 ft	Drilled 11/2010, temporarily abandoned
991	12-22-29 State	ne se 22-12n-29e	1690 ft	Drilled 11/2010, temporarily abandoned
1083	11-25-30 Prize	se nw 25-11n-30e	3027 ft	Drilled 11/2012, temporarily abandoned
1084	11-21-30 State	sw ne 21-11n-30e	not drilled	Permit expired 5/28/2012
1117	11-02-30 State	ne sw 02-11n-30e	not drilled	Permit expired 12/25/2012
1118	11-08-29 State	se se 08-11n-29e	not drilled	Permit expired 12/25/2012
1146	10-26-30 State	sw ne 26-10n-30e	2819 ft	Drilled 6/2013, temporarily abandoned
1147	09-25-30 State	nw nw 25-09n-30e	3000 ft	Drilled 7/2013, temporarily abandoned
1148	10-03-30 Fee	ne sw 03-10n-30e	not drilled	Permitted 04/2013

10/10/2013 (73 permitted: 24 expired, 1 current, 48 drilled: 13 plugged, 11 SI, 24 TA)



**St. Johns Field Development Update
for AZOGCC**

**Ryan McCreery and Corrie Hartman
10/18/2013**

Agenda

- KM Overview
- Review of work done to date
- 2013-2014 Subsurface Objectives
- Drilling Program
- Well Testing
- Development Plan
- Q&A

About Kinder Morgan



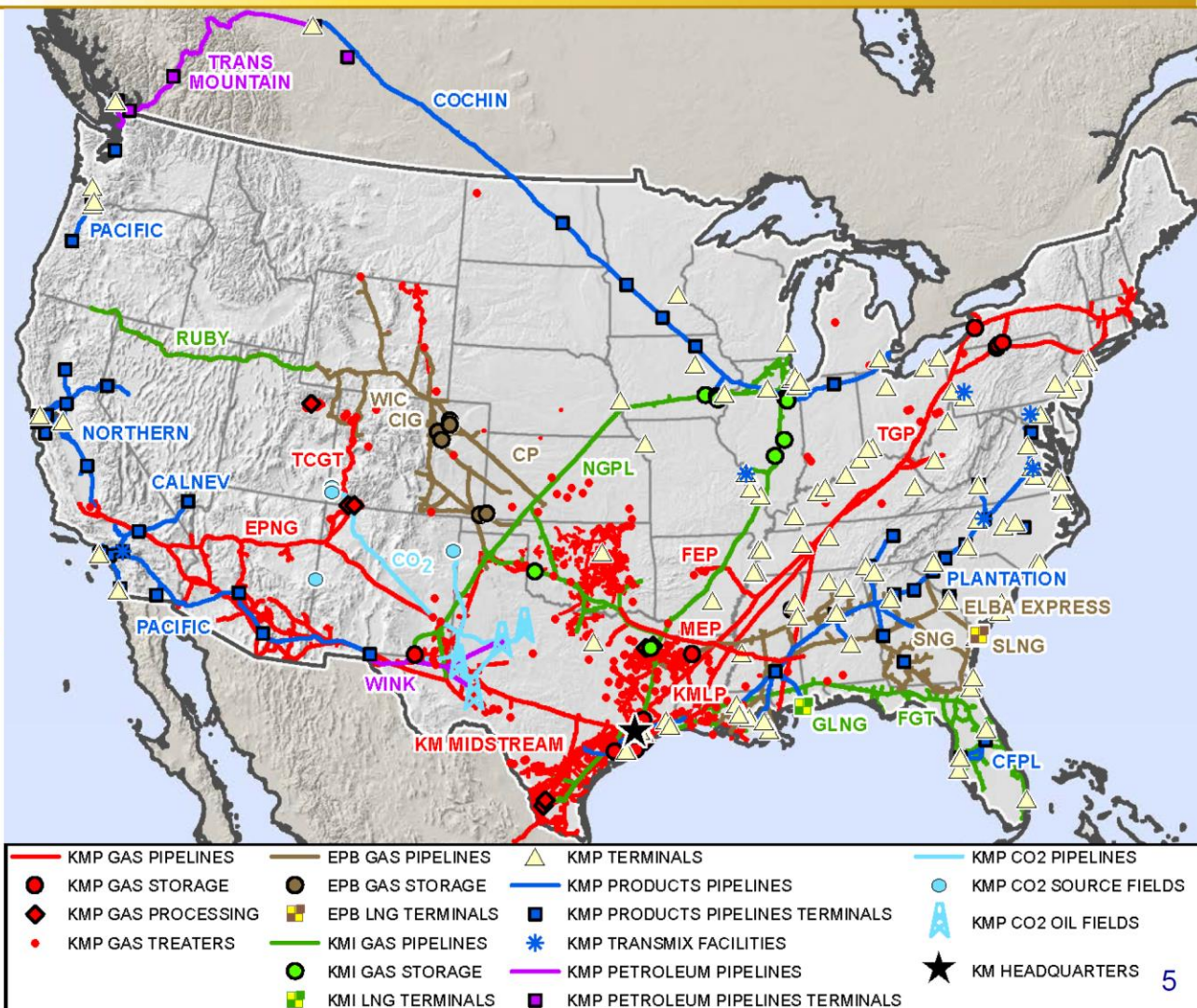
- Kinder Morgan is the largest midstream and the third largest energy company in North America with a combined enterprise value of approximately \$105 billion. We own an interest in or operate approximately 82,000 miles of pipelines and 180 terminals.
- Kinder Morgan has approximately 11,500 employees located throughout the United States and Canada.
- We operate like a giant toll road, receiving a fee for our services and providing connectivity for our customers.
- Kinder Morgan does not have a Political Action Committee (PAC), or make any political contributions.

Kinder Morgan Assets

- **3rd largest energy company in North America with combined enterprise value of approximately \$105 billion** ^(a)
- **Largest natural gas network in U.S.**
 - Own an interest in / operate almost 70,000 miles of natural gas pipeline
 - Connected to every important U.S. natural gas resource play, including: Eagle Ford, Marcellus, Utica, Uinta, Haynesville, Fayetteville and Barnett
- **Largest independent transporter of petroleum products in U.S.**
 - Transport ~1.9 MMBbl/d ^(b)
- **Largest transporter of CO₂ in U.S.**
 - Transport ~1.3 Bcf/d of CO₂ ^(b)
- **Largest independent terminal operator in U.S.**
 - Own an interest in or operate ~180 liquids / dry bulk terminals
 - ~112 MMBbls domestic liquids capacity
 - Handle ~106 MMtons of dry bulk products ^(b)
- **Only Oilsands pipe serving West Coast**
 - TMPL transports ~300 MBbl/d to Vancouver / Washington State; expansion under way increasing capacity to 890 MBbl/d

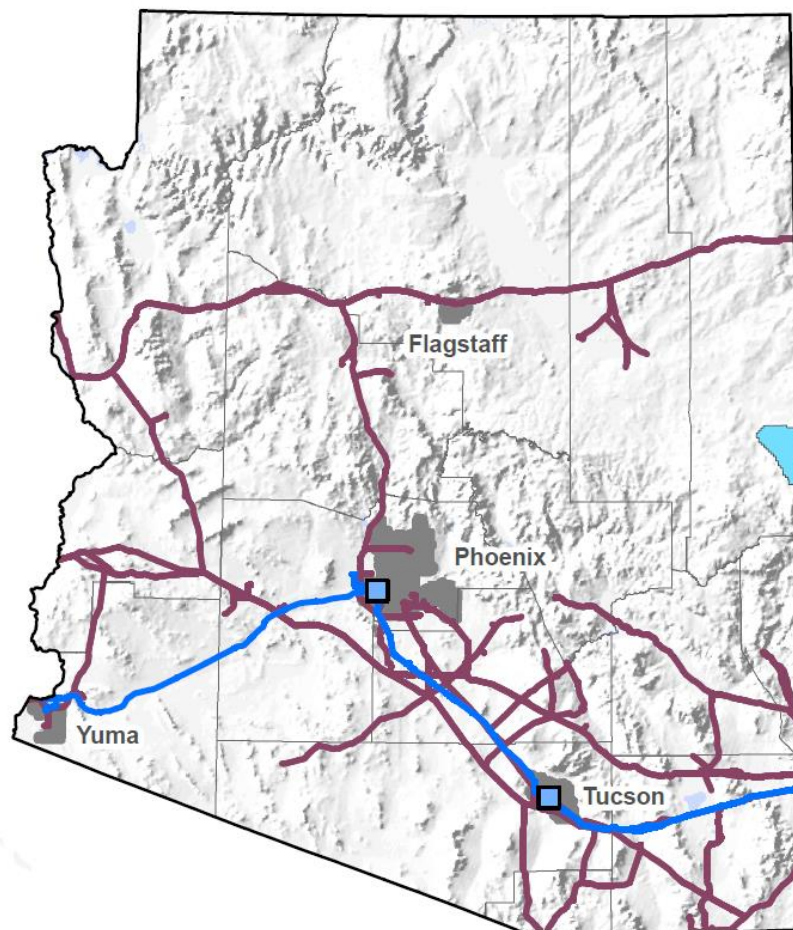
(a) Combined enterprise value of KMI, KMP & EPB; see footnotes on slide 3 for further information.

(b) 2013 budgeted volumes.



Kinder Morgan in Arizona

- Kinder Morgan employed **561** in 2012
- Kinder Morgan paid over **\$18.5 million** to state taxing bodies in 2012.
 - Over **\$2.4 million** to Maricopa Co.
- Kinder Morgan maintained a payroll of over **\$37.6 million** in 2012
- Kinder Morgan operates approximately **5,000 miles** of pipeline in Arizona

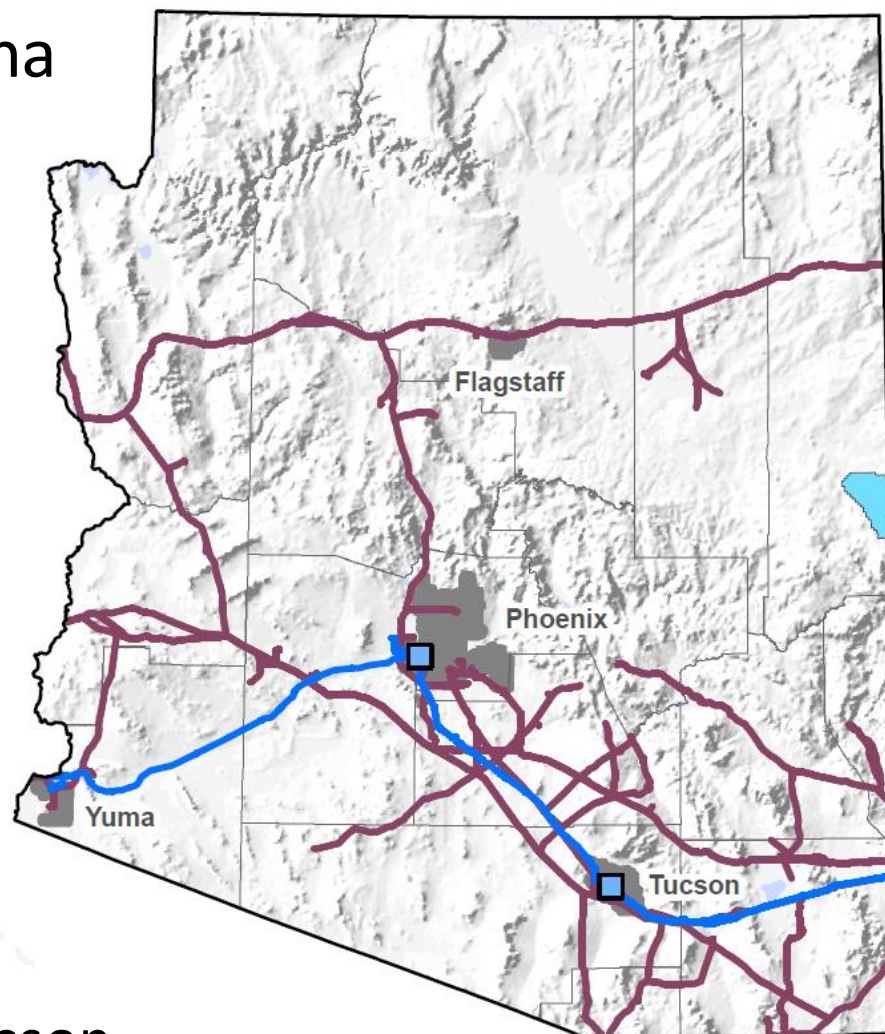


- El Paso Natural Gas
- Products Pipelines
- Products Pipelines Terminals
- CO2 Source Field

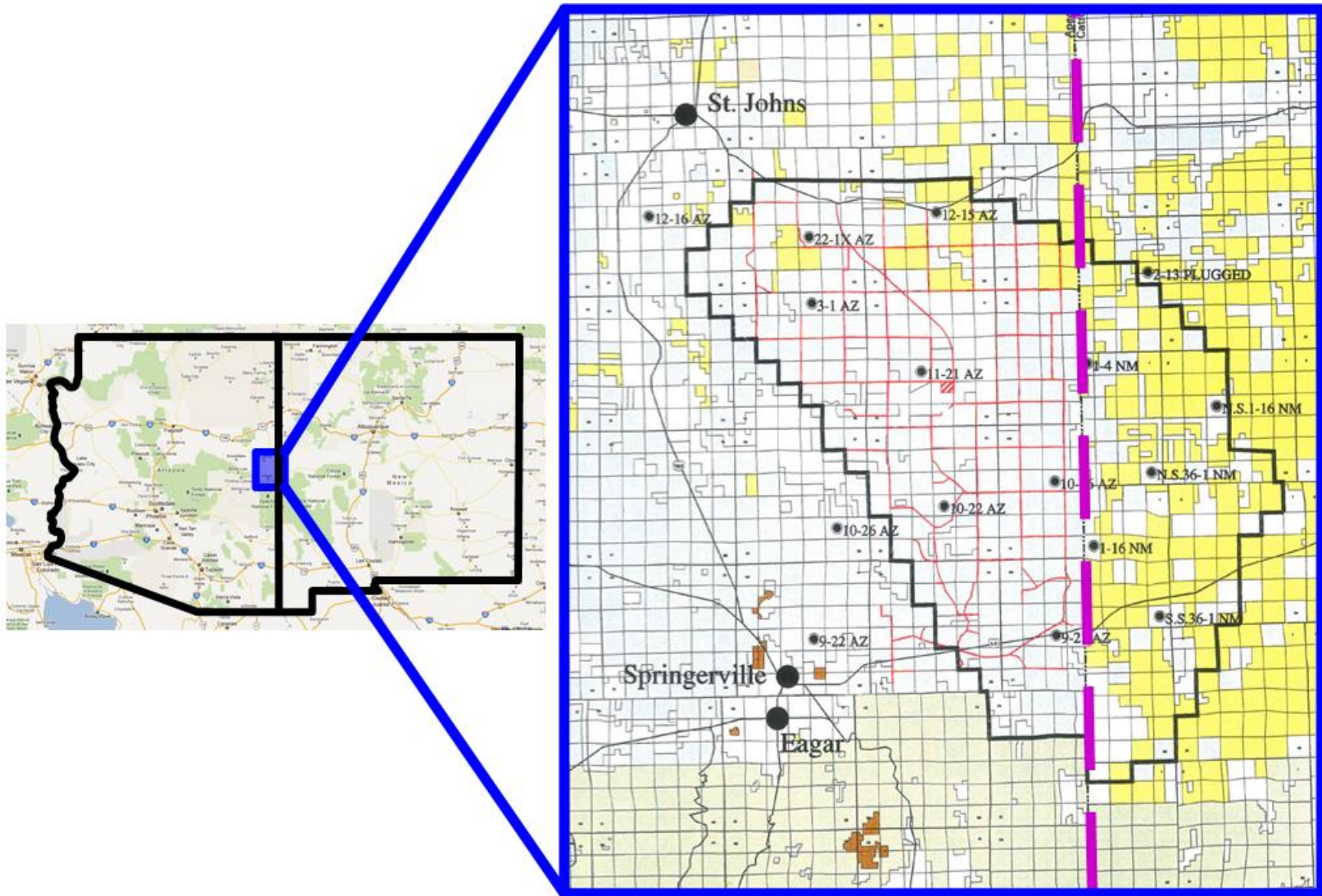
Kinder Morgan in Arizona

Kinder Morgan assets in Arizona include:

- Santa Fe Pacific Pipeline (SFPP)
- El Paso Natural Gas (EPNG)
- Mojave Pipeline
- St. Johns CO2 Source Field
- Products Pipelines Terminals
- Corporate offices in Phoenix & Tucson



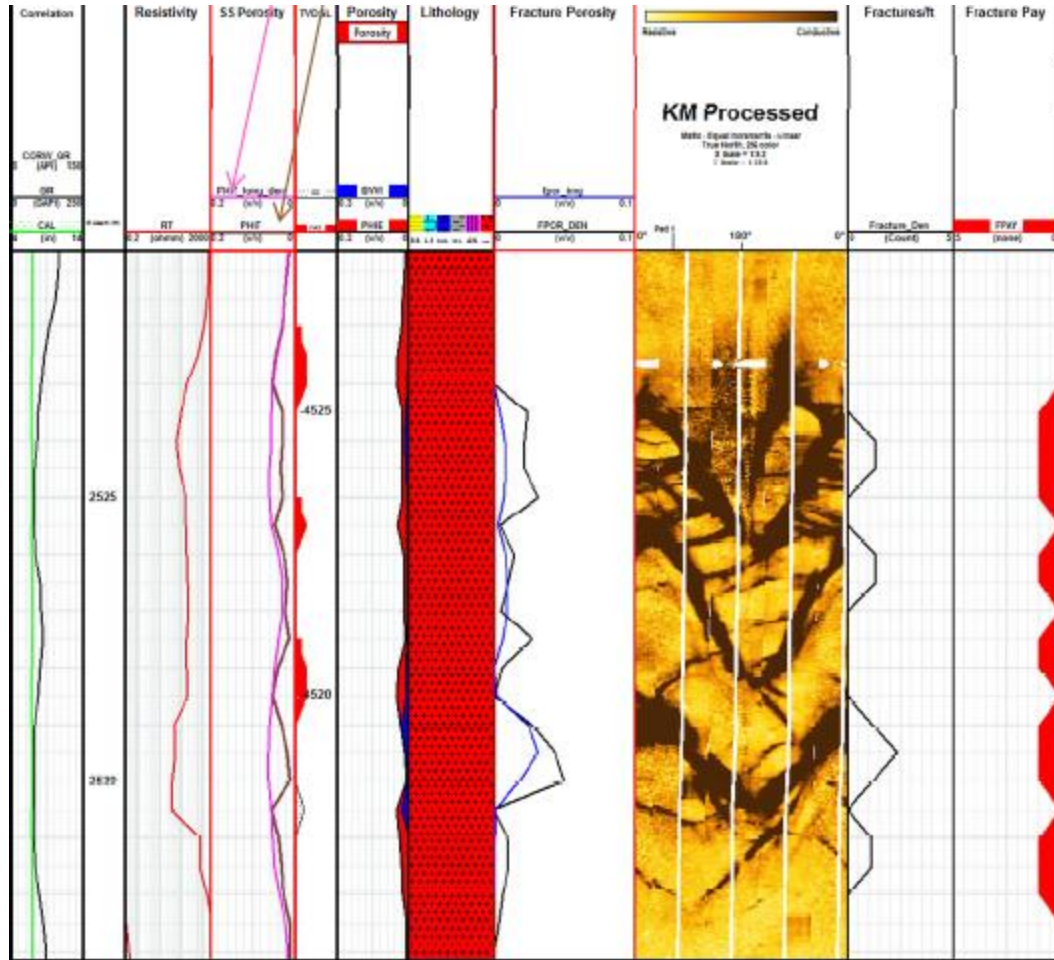
St. Johns Field Location



St. Johns Status

- To date KM drilled 8 wells; Production tested 5 existing wells
- Advanced understanding of CO2 reservoir (naturally fractured granite)
- Improved well design; air drilling and open hole completions, no acid stimulation or hydraulic fracturing planned
- Focused development area; reduced surface impact through horizontal drilling and dual-well drilling pads
- Continue appraisal to reduce remaining subsurface uncertainty while maturing surface infrastructure plans
- Stakeholder engagement plan

St. Johns Natural Fractures



St. Johns 2013-2014 Objectives

- Geophysical study to assess presence and extent of mafic / non-productive rock intrusions within development area.
- Develop predictive petrophysical and geophysical models to help with well placement and reduce well costs
- Evaluate reservoir in northern part of the development area (limited data)
- Verify productivity, forecast decline (contribution from matrix vs fractures), and horizontal vs. vertical well performance
- New well locations around development area boundaries to test aerial extent and reservoir continuity
- Update field development plan with new information

St. Johns 2013-2014 Wells

KINDER MORGAN



2013 wells

11-12-29 vert
10-3-30 vert
10-26-30 SRHZ (reentry)



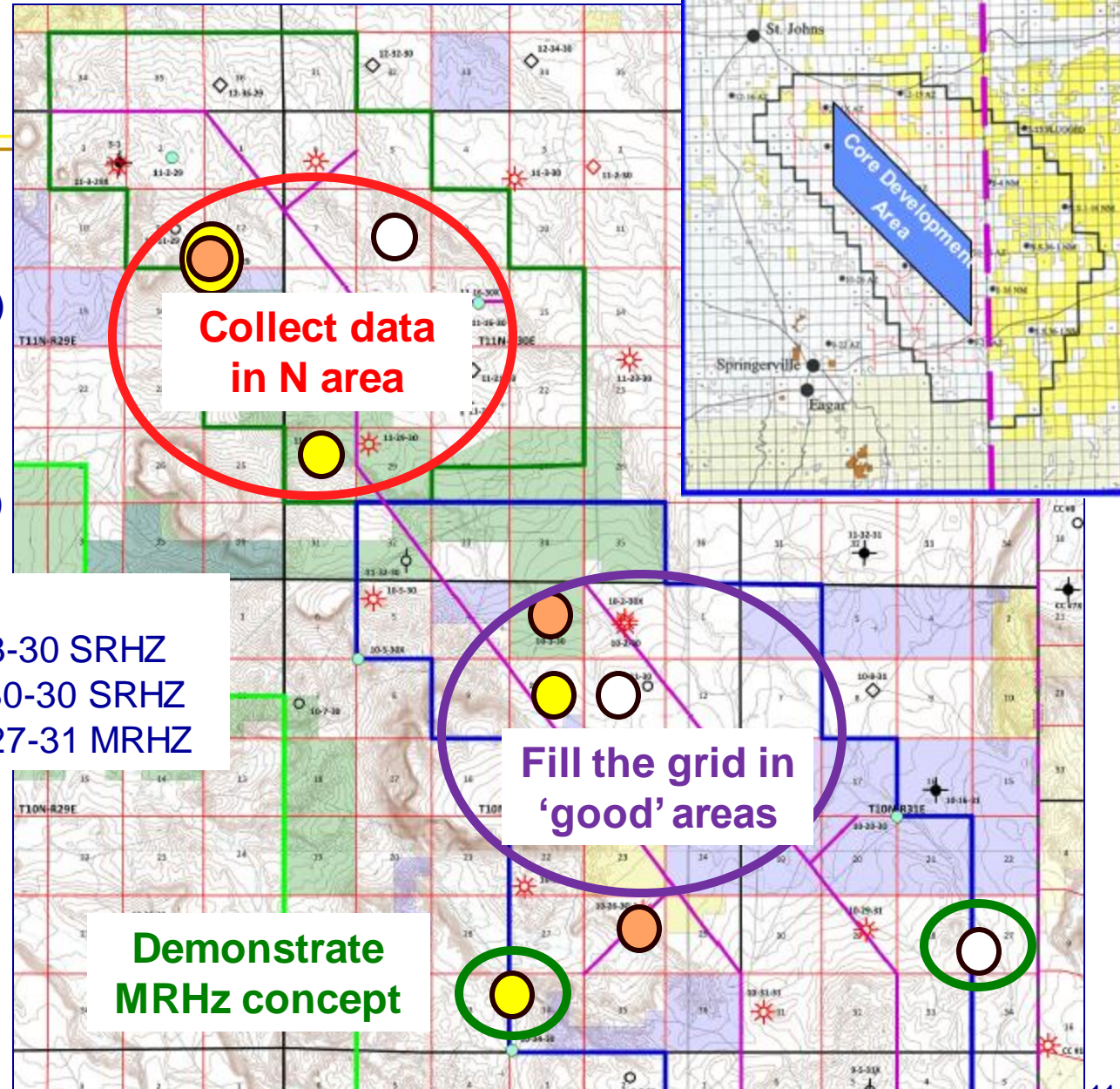
2014 wells

11-30-30 vert
10-10-30 vert
11-12-29 SRHZ (reentry)
10-34-30 MRHZ



Alternates

10-15-30 vert;SRHZ 10-3-30 SRHZ
10-11-30 vert;SRHZ 11-30-30 SRHZ
11-8-30 MRHZ 10-27-31 MRHZ



Well Testing

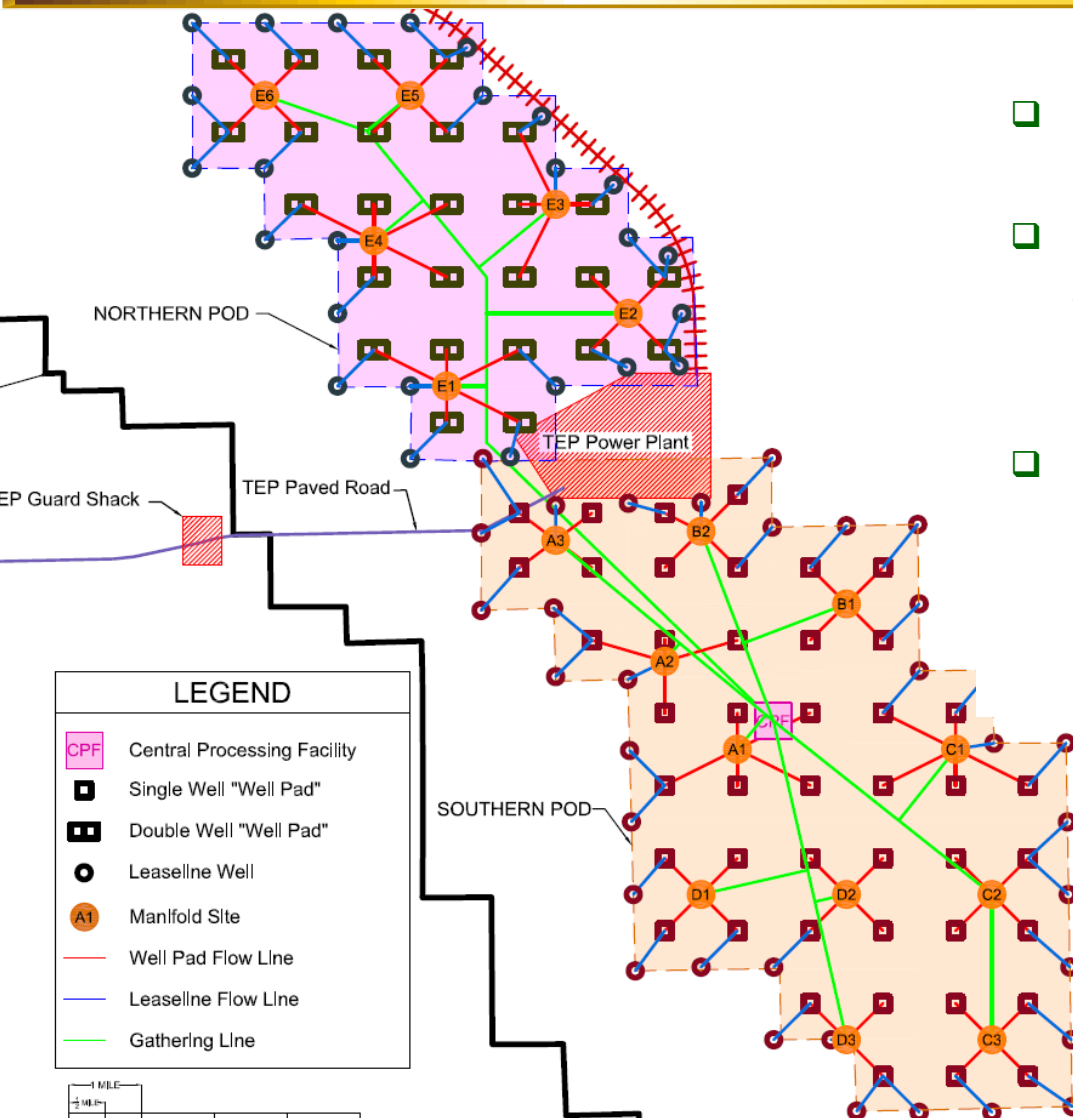
- While drilling, test other intervals with significant gas shows (Amos Wash)
- Pressure response testing (10-3-30 new drill and 10-2-30) to assess reservoir connectivity
- Production test 10-5-30 to validate coning model - correlate pressure (drawdown) and water coning rate
- Production testing newly drilled wells to confirm deliverability
- In case of poor deliverability, drill horizontal well

Subsurface Plan 2015+

- 2015+ (Field Development Program)
 - Plan development drilling in conjunction with gathering system buildout (South to North)
 - Drill and complete required number wells to achieve 300 MMCFPD by mid-2016 (2 rig program)
 - Plugging program beginning in 2015

St. Johns CO₂ Development Plan

Well and Field Development Plan



Multi-year drilling program

- 160 +/- wells

Well Flowlines (wells to manifolds):

- 57 miles south and 36 miles north
- 6" & 8" IPC CS w/ ZapLok connections

Gathering System (manifolds to CPF):

- 45 miles south and 19 miles north
- ≤ 12 " IPC CS w/ ZapLok
- > 12 " Welded CS w/ HDPE Liner

Q & A

AZOGCC

Oct 18, 2013.

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