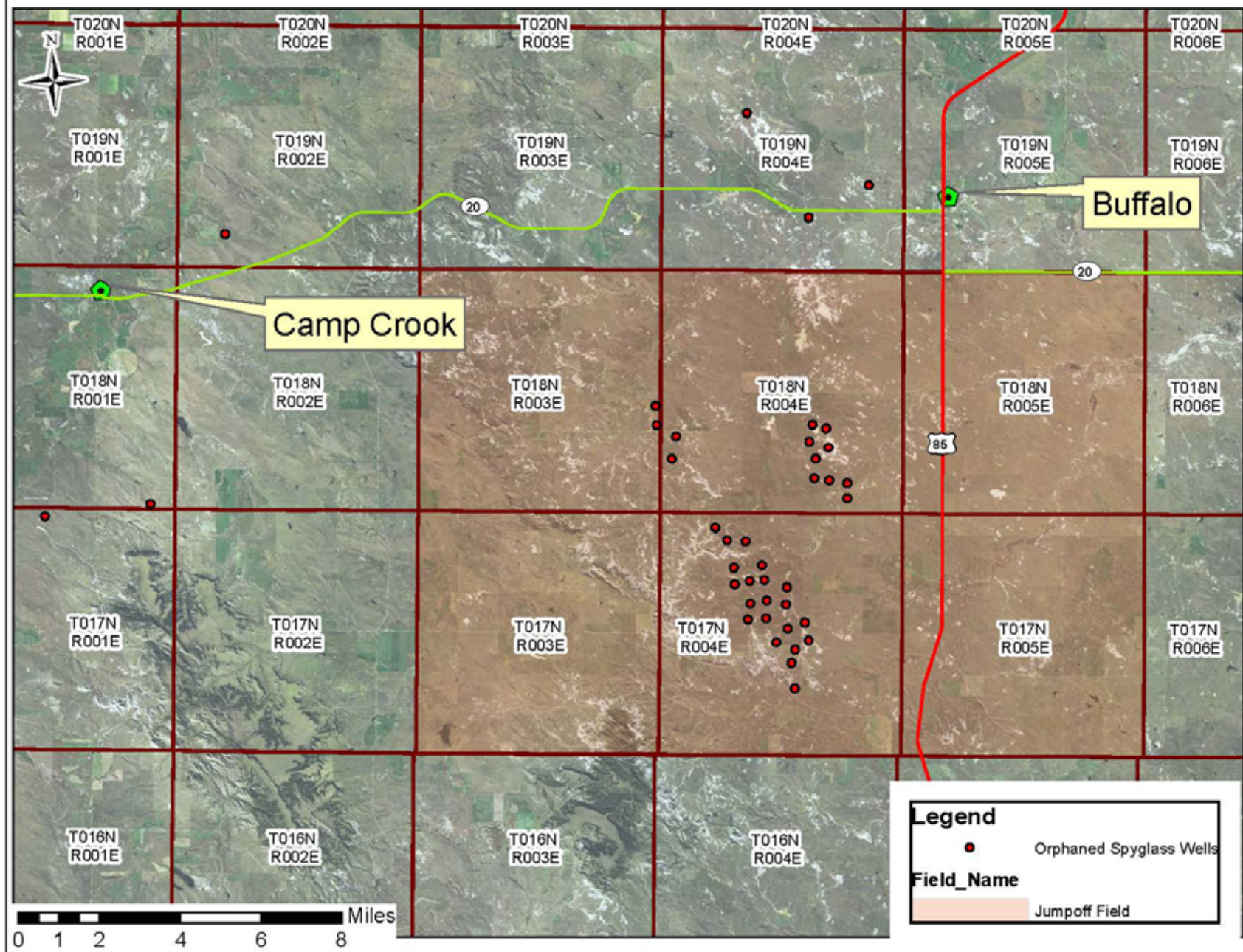


40 Abandoned Gas Wells in Harding County

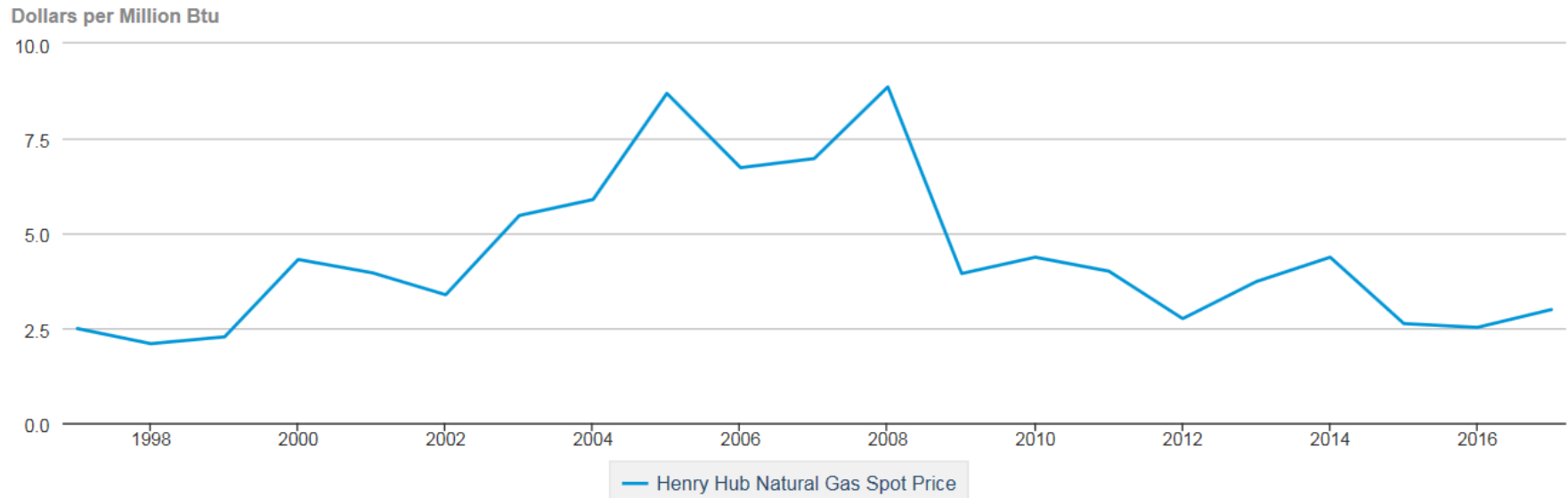
DENR Presentation for 6-11-19 meeting of
SD Government Operations and Audit Committee

- Overview of Spyglass, Cedar Creek LP's development in Harding County, 2006 - 2012
- Current condition of orphaned Spyglass wells and the Jumpoff Field
- What about the landowners?
- Background on landowner issues in Harding County
- Summary: Where we're at now

Spyglass Cedar Creek LP's 40 Orphaned Wells, Harding County, SD



U.S. Natural Gas Prices—1997 - 2017

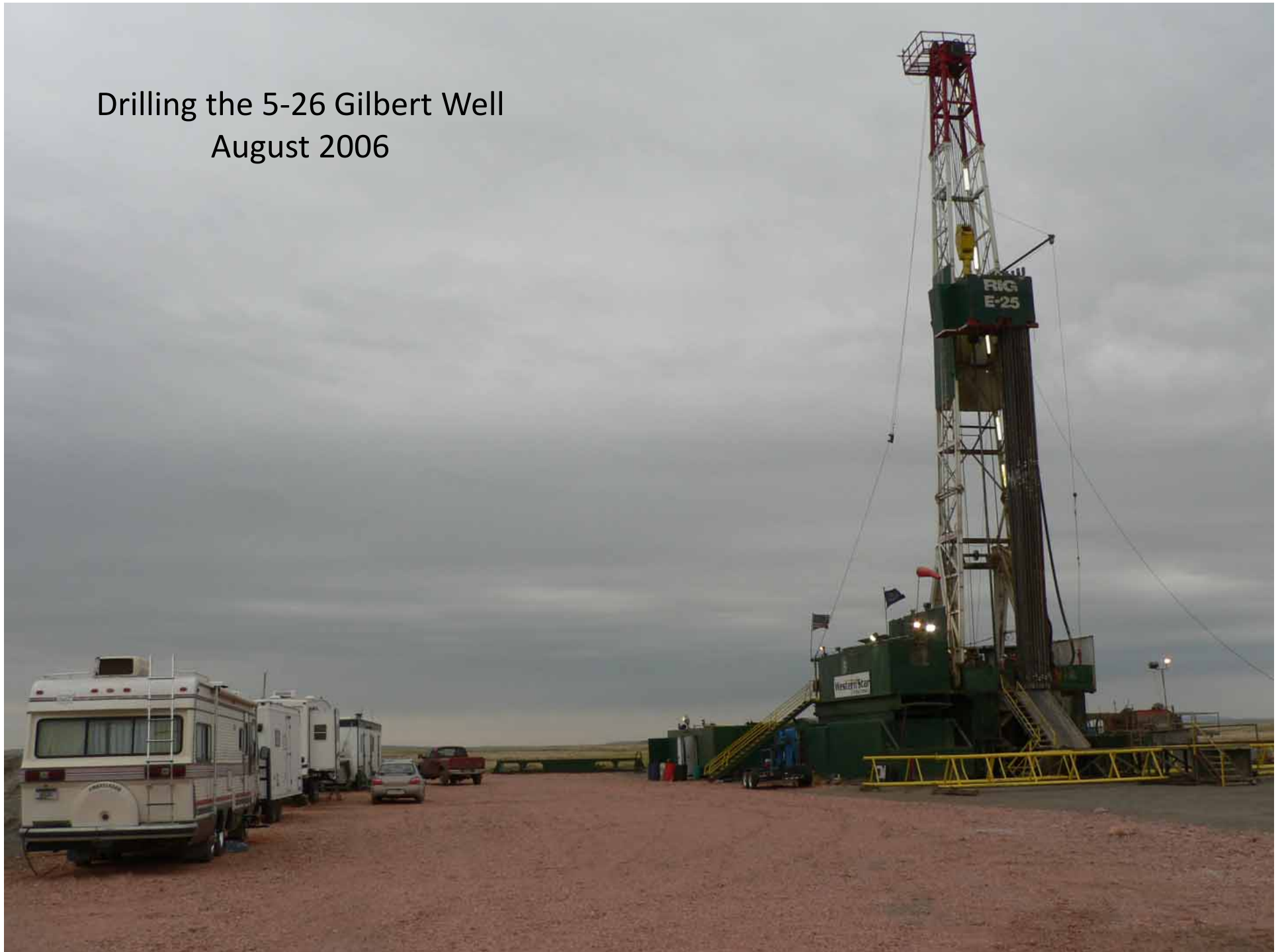


From <https://www.eia.gov/dnav/ng/hist/rngwhhdA.htm>

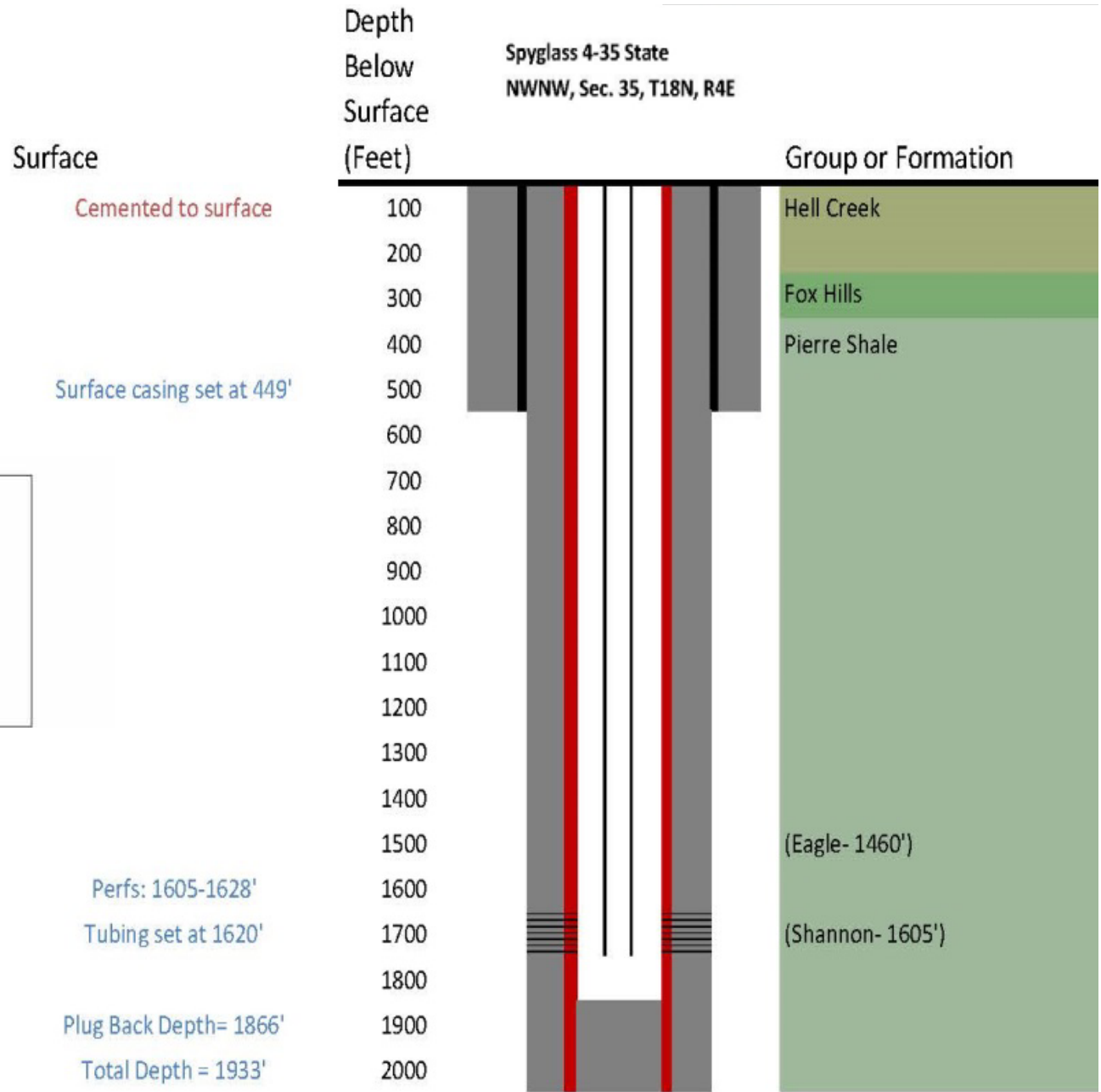
Spyglass Permits & Approvals

- 2006 - 2008 Spyglass petitioned the Board of Minerals and Environment with three spacing requests pertaining to where Spyglass was allowed to drill gas wells – BME held three separate hearings and approved all three requests, **No Intervention.**
- 2006 - 2010 DENR issued 48 permits between March 2006 and July 2010 (8 wells plugged or never drilled), **No Permitting Problems.**
- Local Reaction:
 - Spyglass purportedly made unsustainably-high annual surface damage payments, which likely made the project attractive to surface owners.
 - DENR heard one report of hostile negotiations by Spyglass during the leasing phase.
 - With the exception of split-estate surface owners, we didn't hear complaints from affected landowners until Spyglass's financial problems began.

Drilling the 5-26 Gilbert Well
August 2006



Cross Sectional Schematic Showing Details of Typical Spyglass Well Construction



10-27 State Well Reserve Pit, 2006



10-27 State Well Pad Area, 2017



State 10-35 Well



Extra gathering line pipe
left near well site

6-22 Fox Well
Mar 2014



Gilbert
Pipeline, 2012





**Compressor Station
July 2008**



**Compressor Station
October 2008**

5-26 Gilbert Well
June 2015



Current Condition of Orphaned Spyglass Wells and Jumpoff Field



State 12-16 Well

In August, 2018 the Rapid City Journal ran a story on the Jumpoff Field, which referred to “fizzling and bubbling” wells

A ‘convoluted train wreck’: Natural gas project goes bust in SD

State, landowners potentially saddled with 40 idled wells near Buffalo

By Seth Tupper, Journal staff | Aug 28, 2018 | 8 min to read

SEE YOUR FAVORITE NEWS



Ray Gilbert is one of the landowners in Harding County affected by a natural gas project that has gone bust, leaving 40 idled wells on the landscape.

A gauge on a natural gas well

By Seth Tupper, Journal staff



From: https://rapidcityjournal.com/news/local/a-convoluted-train-wreck-natural-gas-project-goes-bust-in/article_e7f15441-d0c5-595c-ade2-40bf1234cf4c.html

Here’s a photo of what the article is referring to; this is a normal occurrence for gas wells, and does not constitute a natural gas leak



5-26 Gilbert Well

- DENR has monitored Spyglass wells annually since 2012
- Two leaking wells identified since 2012
- Both wells fixed by Spyglass as directed by DENR

State 8-8 Well
June 2018



Peterson 10-5 Well
June 2018



State Jo 16-27 Well
June 2018



Gilbert 12-9 Well
June 2015



Peterson 6-5 Well
July 2017



Jumpoff Field Compressor Station, June 2018



4-35 State Well
July 2017

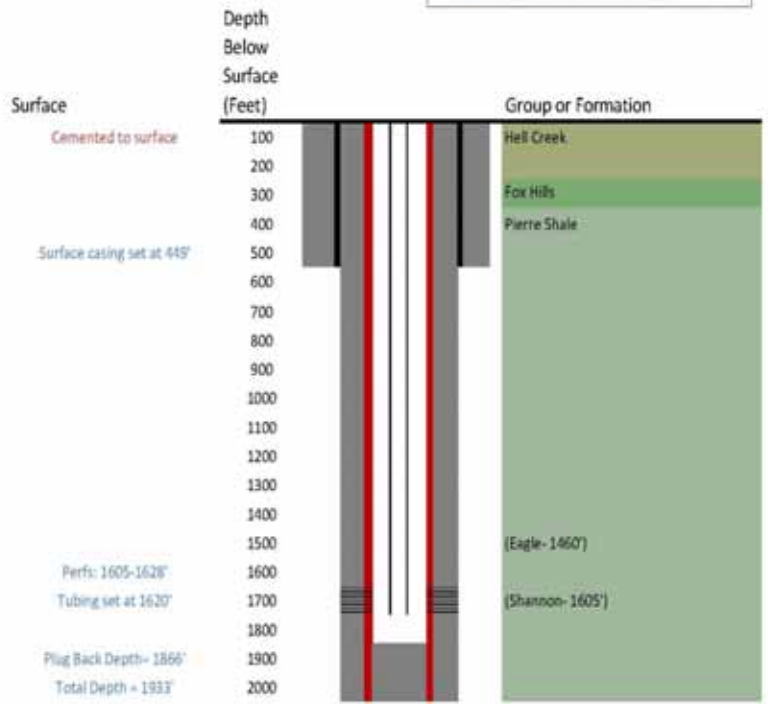


Well Name:
Location:

Spyglass 4-35 State
NWNW, Sec. 35, T18N, R4E

LEGEND

- Cement
- Surface Casing
- Production Casing
- Red Text DENR Calculations / Comments
- Blue Text Application / Well Comp. Report

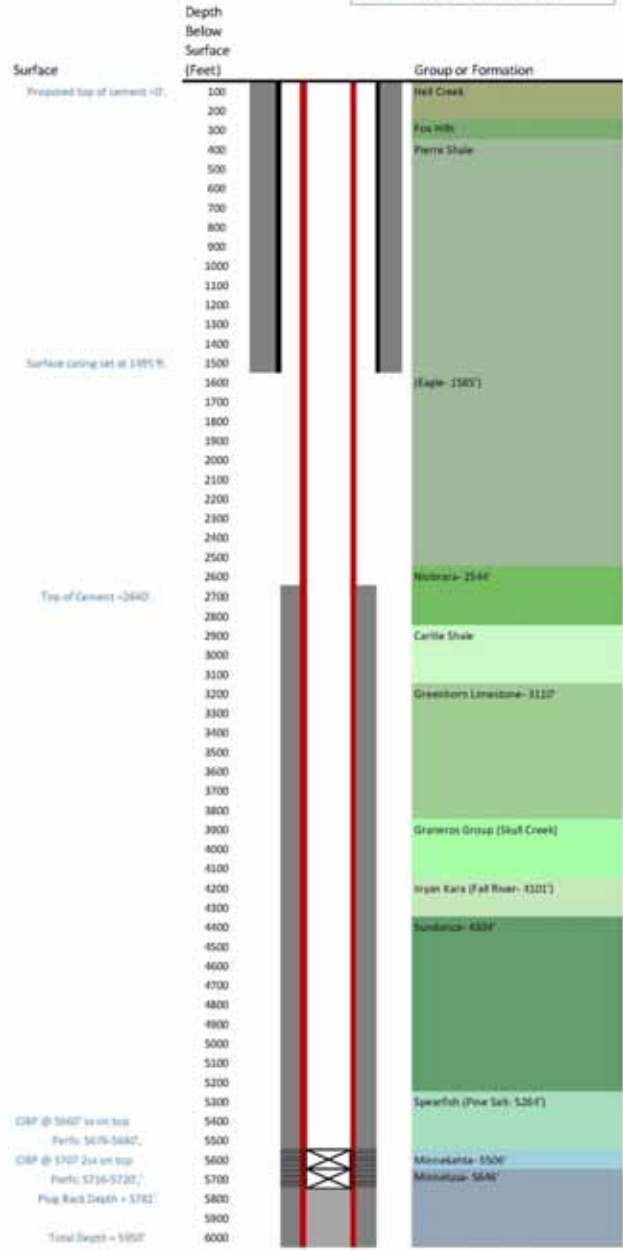


Well Name:
Location:

Spyglass 13-24R Price
SWSW, Sec. 24, T19N, R4E

LEGEND

- Cement
- Surface Casing
- Production Casing
- Red Text DENR Calculations / Comments
- Blue Text Application / Well Comp. Report



Cross Sectional Schematics Showing Details of Typical Spyglass Well Construction: Shallow (left) vs. Deep (right)

Plugging Cost Estimates for Spyglass Wells

DENR Gas Well Plugging and Surface Restoration Cost Estimate

Operator: Spyglass Cedar Creek
 Average well depth: 5195' (4 wells)
 Average site acreage: 1.1 acres

Service/Item	Cost
Surface Restoration: Mobilization, removing equipment, grading, replacing topsoil, reseeding, spraying weeds	\$8,000
Completion Rig: 2 day at \$4,750/day	\$9,500
Haul Water to Site:	\$1,000
Wireline Services: Set Bridge Plug, Set Cement Retainer, Perforating	\$10,000
Cementing Services:	\$10,000
Administrative Overhead:	\$1,000
Contract Labor:	\$2,500
10% Contingency:	\$4,200
Total per well:	\$46,200
Accumulative Deep Well Cost:	\$184,800

DENR Gas Well Plugging and Surface Restoration Cost Estimate

Operator: Spyglass Cedar Creek
 Average well depth: 1868' (36 wells)

Service/Item	Cost
Surface Restoration: Mobilization, removing equipment, reseeding, spraying weeds	\$4,000
Completion Rig: 1 day at \$4,750/day	\$4,750
Haul Water to Site:	\$1,000
Cementing Services:	\$5,500
Administrative Overhead:	\$500
Contract Labor:	\$2,000
10% Contingency:	\$1,775
Total per well:	\$19,525
Accumulative Shallow Well Cost:	\$702,900

Projected Total Spyglass Plugging Cost:	\$887,700
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What About the Landowners?

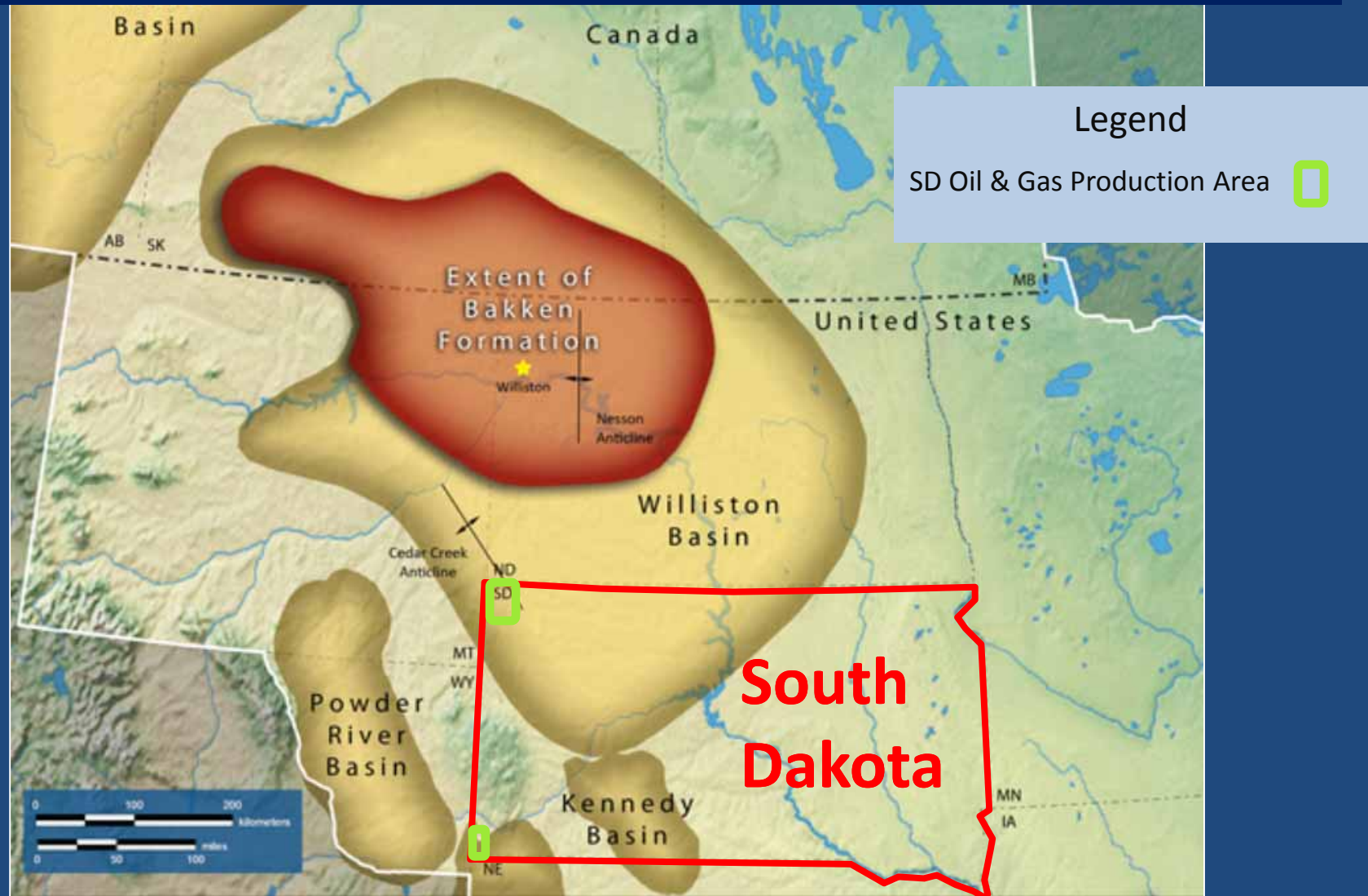
- Spyglass Cedar Creek abandoned 40 wells, leaving 24 well sites on private surface.
- DENR has not abandoned landowners; we're doing everything within our statutory authority to either:
 - Continue efforts to close the field; or
 - Facilitate a new operator returning the Jumpoff Field to production.

What About the Landowners?

- What DENR Can Do:
 - Continue efforts to close the field; or
 - Facilitate a new operator returning the Jumpoff Field to production.
- What DENR Cannot Do:
 - Compensate affected property owners for financial losses suffered during the course of private business agreements with Spyglass Cedar Creek, LP; or
 - Appease split-estate surface owners who have been unhappy for 65 years due to SD mineral law allowing mineral property development with no surface royalties.

Landowners Impacted by Oil & Gas Development

2012 Legislative Oil & Gas Summer Study



Modified from http://citadelep.com/wp-content/uploads/2012/03/Bakken_Areal_Extent.png



- Ag. Land Assessment Task Force
- Appropriations
- Bonding
- Code Commission
- Education Reform Advisory Council
- Executive Board
- Government Operations & Audit
- Legislative Planning Committee
- Legislative Procedure
- Oil and Gas Study

Oil and Gas Study — 2012

Detail Meetings Documents

Detail

Printer Friendly

Chair: Solum, Roger
Vice-Chair: Nelson, Tom
Representatives: [Dennert, Paul\(D\)](#); [Hawley, Spencer\(D\)](#); [Hoffman, Charles\(R\)](#); [Magstadt, Melissa\(R\)](#); [Olson, Betty\(R\)](#); [Rozum, Tona\(R\)](#); [Schrempp, Dean\(D\)](#); [Solum, Roger\(R\)](#)
Senators: [Maher, Ryan\(R\)](#); [Nelson, Tom\(R\)](#); [Rampelberg, Bruce\(R\)](#); [Rave, Tim\(R\)](#); [Rhoden, Larry\(R\)](#); [Sutton, Billie\(D\)](#); [Tieszen, Craig\(R\)](#)
Staff: Reuben Bezpaletz/Fred Baatz
Scope /Authority: Study of the issues and opportunities involved surrounding the emerging oil and gas exploration in northwest South Dakota, including the opportunities and consequences regarding the current oil boom in North Dakota.

- Scope of 2012 Legislative Summer Study: Look at opportunities and potential consequences for northwest South Dakota in light of the Bakken oil boom.
- Part of the original impetus for this Summer Study was legislators who wanted to ensure DENR was not being too regulatory and thereby discouraging the North Dakota boom from moving south into South Dakota.

Main Findings of the 2012 Governor's Oil & Gas Work Groups

South Dakota Oil & Gas Development/Preparedness Executive Branch Work Groups

Summary of Findings

Compiled by
The Office of Governor Dennis Daugaard

September 2012



-The likelihood of a “Bakken-sized” boom in South Dakota is extremely low.

-SD’s Oil & gas development will likely continue at the slow and steady rate experienced since the 1950’s.

-No impending boom means no significant societal disruptions.

-Tax incentives will not stimulate additional oil & gas development in SD.

-Apart from bonding requirement, SD has adequate environmental regulations in place to safeguard natural resources.

-Some split-estate surface owners impacted by oil & gas development in Harding County are disgruntled, and want additional compensation and protections.

Legislative Oil and Gas Study — 2012 Committee Documents (10/30/12)

- Bill Draft 1 - revise the provisions regarding **plugging and performance bonds for oil and gas wells** and to repeal the supplemental restoration bond requirement.
- Bill Draft 2 - **revise the bonds** required to obtain a mineral drilling permit.
- Bill Draft 3 - provide for **mediation between mineral developers and surface owners** in certain disputes over surface depredation.
- Bill Draft 4 - **provide funding for unresolved surface depredation caused by oil and gas exploration** and to make an appropriation.
- Bill Draft 5 - require certain posting of information if hydraulic fracture stimulation is performed on oil and gas wells.
- Bill Draft 6 - **require mineral explorers to give notice to surface owners before entering the land.**
- Bill Draft 7 - provide for the **creation of a trust account for unlocatable mineral interest owners.**
- Bill Draft 8 - **prohibit the rustling of sheep as grand theft.**
- Bill Draft 9 - provide for the **award of attorney fees and costs in certain surface depredation cases.**

Legislative Oil and Gas Study — 2012 Committee Documents (10/30/12)

- Bill Draft 10 - revise the **compensation requirements payable to surface owners** for exploration damages and to allow the payments to be made in multiple installments.
- Bill Draft 11 - provide sales and use tax refunds for certain oil and gas exploratory and development wells.
- Bill Draft 12 - provide additional highway patrol and additional motor carrier service in northwestern South Dakota and to make an appropriation therefor.
- Bill Draft 13 - provide funding to the Department of Environment and Natural Resources to conduct surveys and analysis of sand and clay deposits and to make an appropriation therefor.
- Bill Draft 14 - impose an **excise tax to address depredation of property resulting from certain energy development activities** and to establish an energy property depredation fund.
- Bill Draft 15 - revise certain provisions relating to the **termination of certain mineral interests**.
- Bill Draft 16 - provide for the **award of treble damages in certain surface depredation cases**.
- Bill Draft 17 - require the Commissioner of School and Public Lands to **protect certain lands from surface depredation by mineral developers**.

2013 Senate Bill 1 (SB1)

- Proposed by industry participating in the 2012 Summer Study and supported by DENR; proposed increasing the Oil & Gas bond requirement for all oil & gas wells.
- SB1 Amended as requested by small, local operators to increase bond only for deep wells, leaving lower bond requirement for shallow wells such as Spyglass's Jumpoff Field wells.

Good News Summary

- Jumpoff field was installed when gas prices were high.
- Money was no object, so the 40 wells were properly constructed with all new materials.
- Only 4 wells are deep (i.e. more than 5,000 feet deep); 36 wells are relatively shallow (i.e. less than 2,000 feet deep).
- 36 shallow wells are completed into the Pierre shale.
- Due to the construction methods and the Pierre shale, the field poses no short term or long term threat to locally utilized ground water resources.
- No major earthwork is needed because Spyglass completed all major surface restoration at areas disturbed during construction activities.
- Spyglass settled with both surface and mineral owners during startup.
- Field was productive in terms of gas production.
- Field could easily be brought back on-line.
- 40% of the wells occupy surface lands owned by SD Office of School & Public Lands.

Bad News Summary

- Spyglass is a small, undercapitalized startup company for natural gas production.
- Soon after Jumpoff field went online, gas prices started to decrease.
- By 2012, revenues from natural gas for Spyglass had fallen due to the gas market being in the tank and the field was no longer operated.
- 3 attempts to buy the field have been made, but unsettled lawsuits and \$18 million in liens on the wells have prevented a sale.
- Because some of the mineral owners started relying on money from royalties, they are upset now that they are receiving no royalties.
- Because a few of the surface owners had severed mineral rights, they received no royalties, but are now stuck with well heads on their land.
- Because of the complex mixed ownership of surface land and mineral rights, there is no one-size fits all solution to the myriad of owner preferences.
- State law limits plugging and reclamation bonds for a natural gas field to \$30,000; a Texas bank holding the bond mistakenly gave Spyglass \$20,000 back, so \$10,000 is all the bond that has been revoked by the Board of Minerals and Environment.

DENR's Attempts to Right an Economic Development Project Gone Bad Due to Market Conditions Gone South

- DENR has increased transparency by putting all of its oil and gas files on line at <http://www.sdgs.usd.edu/sdoil/default.aspx>.
- DENR has increased transparency by putting all of its oil and gas production data on line at <https://denr.sd.gov/des/og/producti.aspx>.
- During the 3 previous attempts to buy the field and put it back into operation, upon request DENR provided both sellers and buyers with information needed to complete a deal.
- After no deals were reached, DENR decided enough was enough and last year initiated an enforcement action against Spyglass.
- Spyglass contested the enforcement action; during pre-hearing conferences, the pre-hearing chair of the Board of Minerals and Environment tried to negotiate a plan to either reopen or close the field along with an increase in the plugging bond.
- On the last day, Spyglass reneged on the deal and threatened to sue the board due to its *"hostile actions."*

DENR's Attempts to Right an Economic Development Project Gone Bad Due to Market Conditions Gone South

- As a result, the Spyglass enforcement action has been on the agenda for the Board of Minerals and Environment during the last five meetings (i.e. 12/20/18; 1/12/19; 3/21/19; 4/18/19; and 5/15/19).
- The Board revoked Spyglass's drilling permits and remaining \$10,000 bond.
- DENR developed and presented a plan to the Minerals Board to use the \$10,000 bond along with the Quartz \$130,000 bond which was revoked by the Board last year to partially close the Jumpoff Field by working with surface owners to plug selected wells and reclaim wellheads.
- The Board is still considering that plan.
- Meanwhile, the Board requested the Office of Attorney General file a civil lawsuit against Spyglass and its principals in Texas for \$15.5 million, which was filed in Hughes County Circuit Court on 5/14/19.
- To be continued - the Spyglass saga is not over.