OIL + GAS CONSERVATION COMMISSION -MINUTES OF MEETING / JULY 15, 2011 -STEVEN L RAUZI, OIL 4GAS 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 July 15, 2011, 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 April 15, 2011
- 3. Conflicts of interest
- 4. Hearing on Ridgeway Arizona Oil Corporation request for 160-acre spacing for carbon dioxide gas wells in the St. Johns Gas Unit
- 5. Report of Oil & Gas Administrator about new permits and drilling activity
- 6. Review of drilling performance bonds
- 7. Report about Interstate Oil & Gas Compact Commission mid-year meeting in North Dakota
- 8. 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.
- 9. Announcements
- 10. Adjournment

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 7th day of July 2011

OIL AND GAS CONSERVATION COMMISSION

Steven L. Rauzi

Oil and Gas Program Administrator

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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 April 15, 2011

Present:

Dr. J. Dale Nations, Chairman

Mr. Robert L. Wagner, Vice-chairman

Mr. Stephen R. Cooper, Member

Mr. Frank Thorwald, Member

Dr. M. Lee Allison, State Geologist and Director of Arizona Geological Survey

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

Dr. Nations, Chairman, called the regular Commission Meeting of April 15 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 JANUARY 21, 2011

Mr. Wagner moved, seconded by Mr. Cooper:

THAT THE MINUTES OF THE MEETING OF JANUARY 21, 2011, BE ACCEPTED AS PRESENTED

Motion carried unanimously.

CONFLICTS OF INTEREST

None

REPORT OF STATE GEOLOGIST AND DIRECTOR OF ARIZONA GEOLOGICAL SURVEY

Dr. Allison reported that SB 1002, a technical correction taking out old language about interim appointments, was still in the rules committee. He reported that the Arizona Geological Survey's budget was stable and sufficient to continue to provide the same level of support to the Commission as previously, to cover the Chairman's attendance to an annual meeting of the IOGCC, and to contribute about \$1000 of the \$6000 annual dues to the IOGCC. Dr. Allison discussed the elimination of the Arizona Department of Mines and Mineral Resources and how it would be incorporated into the Geological Survey. He reported that all of the oil and gas well records and logs would be available online sometime this summer on an interactive, user-friendly map viewer linked to the Oil and Gas Conservation Commission website.

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 23 new permits were issued and ten wells were drilled since the January meeting. He noted that HNZ Potash was drilling for potash southwest of Petrified Forest National Park and Southwest Exploration/Passport Potash was drilling west of the park. Dr. Allison noted that the U.S. Geological Survey was finishing a global assessment of potash resources and that their calculations of the potential potash resources in the Holbrook Basin were very close to those in the potash report the Arizona Geological Survey put out three years ago. Mr. Rauzi reported that Plains LPG completed a pressure test and sonar survey of its well #3 and that Arizona Natural Gas Storage requested the Federal Energy Regulatory Commission to temporarily hold its pre-filing application to store natural gas in the Picacho Basin because cut backs at ADWR and ADEQ had slowed those agencies ability to review its applications.

DRILLING PERFORMANCE BOND RELEASE PROCEDURE AND CHECK LIST

Mr. Rauzi discussed a new internal procedure and checklist to release an operator's performance bond. He suggested that the Commission move to authorize him to sign the bond release checklist after an operator had fulfilled all of its drilling, plugging, and reporting obligations.

After discussing the procedure, checklist, and monitoring bonding companies, and concurrence by Mr. Cox, the Commissioners expressed appreciation of the checklist to insure that a bond doesn't get inadvertently released but concluded that the procedure and signing the checklist were administrative tasks that did not require a motion by the Commission.

<u>DISCUSSION OF RIDGEWAY ARIZONA OIL CORPORATION WELLS WITHIN THE ST JOHNS UNIT AND POSSIBLE DECISION CONCERNING EXTENSION OF CURRENT STATUS</u>

Mr. Rauzi reported that this was an agenda item from January that he forgot to remove.

STATUS OF RIDGEWAY ARIZONA OIL CORPORATION DRILLING PROGRAM BETWEEN ST JOHNS AND SPRINGERVILLE INCLUDING POSSIBLE REPORT FROM RIDGEWAY

Mr. White reported that there was no new activity to report.

CALL TO THE PUBLIC

None

ANNOUNCEMENTS

Dr. Nations announced that the American Institute of Professional Geologists was planning a field to the Holbrook area on May 21. The Commission scheduled its next meeting at 10:00 a.m. on July 15, 2011, in room 321 at the State Land Department Building in Phoenix.

ADJOURNMENT

Mr. Thorwald moved, seconded by Mr. Wagner:

THAT THE MEETING BE ADJOURNED

Motion carried unanimously. Time of adjournment was 10:41 a.m.

APPROVED

J. Dale Nations
Chairman

GUESTS IN ATTENDANCE

Mr. Curtis Cox Mr. Joe Dixon

Mr. Thomas White

Assistant Attorney General State Land Department

Ridgeway Arizona Oil Corporation



P.O. Box 1110 • St. Johns, AZ 85936

June 13, 2011

-20 6-30-11

Arizona Oil & Gas Commission 416 West Congress, Suite 100 Tucson, AZ 85701

Attn:

Mr. Steve Rauzi

Administrator

RE:

Request for Hearing before the Arizona Oil & Gas Conservation Commission regarding

Application for 160 acre spacing for the St Johns Gas Unit, located in Apache County, Arizona.

Dear Mr. Rauzi:

Please consider this Ridgeway's formal application before the Arizona Oil & Gas Conservation Commission for an exception to Rule (R12-7-107) to change the well spacing in the field, from 640 acre spacing to 160 acre spacing. This request covers all or portions of the following townships:

> Apache County, Arizona Townships 9, 10, 11, and 12 North, Ranges 28, 29, 30, and 31 East, Apache County, Arizona

This makes up the total lands covered in the St. Johns Gas Unit, Apache County, Arizona. Ridgeway is requesting the spacing exception only on the leases that are currently held by Ridgeway Arizona Oil Corp.

Ridgeway is requesting the spacing exception based on William Cobb & Associates 2008 Helium and CO₂ Resource Evaluation Report. The data used in this report was based on all wells drilled including data from the 2008 drilling program.

Based on well data 640 acre spacing would not adequately drain the reservoir, resulting in decreased production and waste. See Cobb report "Type Curve Revisions" section. This application if granted will have the effect of preventing the waste of gas while at the same time protecting the correlative rights of all concerned.

Included are the following Exhibits

- A. Copy of William M. Cobb & Associates 2008 Helium and C02 Resource Evaluation.
- B. Certified Surveyor's map, which includes Ridgeway Wells & outline of the St Johns Gas Unit.

If you have any questions, please feel free to contact me 928-337-3230.

Respectfully submitted.

Thomas White

Field Operations Manager

Enclosures

cc:

ASLD-Joe Dixon

P.O. BOX 1110 St. Johns, AZ 85936

P. 5

Tel: 928-337-3230 Fax: 928-337-3162 Email: ridgewayaz@frontiernet.net

WILLIAM M. COBB & ASSOCIATES, INC.

Worldwide Petroleum Consultants

12770 Coit Road, Suite 907 Dallas, Texas 75251 (972) 385-0354 Fax: (972) 788-5165 E-Mail: office@wmcobb.com

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June 12, 2008

Mr. Barry D. Lasker Enhanced Oil Resources, Inc. One Riverway, Suite 610 Houston, Texas 77056

Re: St. Johns Field Evaluation

Dear Mr. Lasker:

As requested by Enhanced Oil Resources, Inc. (EORI), William M. Cobb & Associates, Inc. (Cobb & Associates) has prepared this report describing our analysis of the in-place and potentially-recoverable volumes of Helium (He) and carbon dioxide (CO₂) within the Unit boundary associated with the St. Johns Field (the Field), based on all well and test data made available to us. This report does not address project economics or a development plan to recover these gas volumes.

Evaluation Stipulations

This report describes the estimation of the in-place and potentially-recoverable He and CO₂ gas volumes in the St. Johns Field. Because these gases are not hydrocarbons, they are not subject to the SEC's, the Canadian Securities regulators', or the petroleum industry's hydrocarbon reserves definitions.

This evaluation was based on well log and production test data supplied by EORI. No review has been made of the agreements, if any, under which the St. Johns Field Unit would operate. No on-site field inspection or review of the title to the properties has been carried out. No review has been made of the permitting requirements of this project, nor of the ability of EORI to obtain any such needed permits or approvals.

The results presented in this report are based on engineering judgment, and as such are estimates. There are uncertainties in the analysis of the available engineering and geologic data. The estimated recoverable volumes may or may not, in fact, be recovered. In any case, estimates of recoverable volumes may increase or decrease as a result of future operations. Therefore, these results are not warranted or guaranteed as to their accuracy, but represent opinions based on the interpretation of technical data.

Mr. Barry D. Lasker St. Johns Field Evaluation June 12, 2008 Page 2 of 7

Summary

The new well log, production, and composition data has allowed Cobb & Associates to make several improvements to our previous analyses of this resource. The changes and improvements include the following:

- Low, Medium, and High cases have been created to address different potential outcomes regarding the gas-water contacts, formation pressures, and development scope
- 2. Additional zone tops and well log data has been gathered and analyzed in 16 new wells
- 3. Additional well test data has been gathered and analyzed in eight new wells, resulting in revised average zone pressures and lowest known gas values
- 4. The gas composition data was used to map He and CO2 concentration
- 5. The production type curves were revised based on the new, by-zone approach to field development and the tests' results
- Based on the above analyses, new by-zone maps have been created for each case, and in-place and potentially-recoverable volumes have been estimated for total gas, He, and CO₂

Table 1 summarizes the results of this analysis.

Low, Medium, and High Case Description

The Low, Medium, and High cases better address some of the major uncertainties associated with the Field: the depth to water, the productivity of the Ft. Apache and the basal Amos Wash (also known as Basal Raven) zones, and the pressure in the Ft. Apache zone. The terms Low, Medium, and High relate to the resulting amount of original gas in place (OGIP). The uncertainty in recoverable gas volumes was addressed for each case by using two different well skin factors (6 and 20) and two potential values for project life (20 and 40 years).

The gas accumulation at St. Johns appears to be underlain by water, based on distant wet tests. Estimating the location of the gas-water contact (GWC) is critical to the calculation of OGIP because the assumed contact depths determine how much of each zone in the reservoir contains gas. Because no GWC has been observed in wells, the lowest known gas (LKG) information has been combined with the observed pressure data, resulting in a set of assumed GWCs for the three cases, as described in the "Lowest Know Gas Values" section, below.

The Amos Wash and Granite Wash zones are now the primary targets, and are assumed to be developed with separate wells in the Low case. The Ft. Apache zone OGIP (behind casing under current drilling plans) is added in the Medium and High case OGIP values as a potential longer-term development target. Having on occasion tested water, the Basal Raven zone OGIP is added to the High case OGIP value, based on the assumption that the

Mr. Barry D. Lasker St. Johns Field Evaluation June 12, 2008 Page 3 of 7

water flows will be found to result from communication with shallower wet zones, rather than water in the Basal Rayen.

There is limited pressure data for the Ft. Apache zone. While the data appears to be ontrend with the Amos Wash data, as described below, there is the possibility (based on the data) that the Ft. Apache is at lower pressure. Therefore, the Medium case uses a gas formation volume factor (Bg) corresponding to that lower pressure, while the High case uses the same Bg as is used for the Amos Wash zone.

Geologic Setting

The St. Johns CO₂ Field structurally trends Northwest-to-Southeast in Apache County of northeastern Arizona and Catron County of northwestern New Mexico. The field area is located on the southern edge of the Colorado Plateau, northeast of the Mogollon Rim and north-northeast of the White Mountains. Ridgeway has conducted productive CO₂ tests in three separate Permo-Pennsylvanian aged zones: the Ft. Apache, the Amos Wash, and the Granite Wash (also known as "Basal Oak Creek" or "Riggs").



Lithologically, the Ft. Apache Member of the Yeso Formation is categorized as dominantly dolomite with subordinate amounts of anhydrite, sandstone, and siltstone. The Amos Wash Member is dominantly sandstone with subordinate amounts of siltstone, dolomite, and anhydrite. Although less significantly covered with core control, the Granite Wash Zone of the Abo Formation currently appears to be a lithologically complex granite wash comprised of highly variable amounts of quartz sandstones and siltstones; dolomites; and reworked, mineralogically-variable Precambrian granites.

All three zones are further complicated by various heavy minerals, particularly hematite. For the purposes of this report, all productive horizons were lumped into two dominant lithologies for petrophysical characterization. Zones with Photoelectric Factor (Pe in barns/electron) values of 2.8 or greater are classified as dolomites (includes anhydrite), and samples with a Pe less than 2.8 are classified as quartz sandstones (and siltstones). The theoretical half-way, or average, Pe value between pure quartz and pure dolomite is 2.475 (pure quartz with a Pe of 1.81 and pure dolomite with a Pe of 3.14). The presence of hematite and other heavy minerals skews the observed Pe range in the dolomite direction such that the 2.8 value is the appropriate lithology discriminator in St. Johns CO₂ Field.

Well Log Analysis

Many of the wells have severe borehole rugosity, causing difficulty in accurate porosity and Sw determination. Estimated porosity and water saturation (Sw) values used in this study are derived from only the part of each zone without severe borehole rugosity.

The porosity values used in this report are derived from cross-plotting the neutron and density curves to resolve lithology variations and gas effects. The resultant porosity values compare favorably to the available core porosity values. Once a petrophysical porosity model was established and verified against core porosity, water saturation (Sw) was determined.

Mr. Barry D. Lasker St. Johns Field Evaluation June 12, 2008 Page 4 of 7

A key unknown in the Sw evaluation for St. Johns is formation water resistivity (Rw). The minimal produced formation water is likely contaminated from much fresher shallow Glorieta Zones or condensation. With Archie Sw parameters assumed at reasonable values of a=1, m=2, and n=2; a cross-plot of resistivity (Rt) versus porosity for all 11 available wells yields an Rw of 0.03 ohm-ms. For this report, an Archie Sw for all zones was calculated with the neutron-density porosity and an Rw of 0.03 with the "a", "m", and "n" parameters set to 1, 2, and 2 respectively.

Table 2 lists all zone structural elevations and petrophysical results for all wells. Table 2 is subdivided into parts "A", "B", and "C". Table 2A lists Ft. Apache data, Table 2B-1 lists Amos Wash data excluding the Basal Raven, Table 2B-2 lists only the Basal Raven data, and Table 2C lists Granite Wash data. On Table 2, IGPT (Industrial Gas Pore Thickness) is equal to Net Pay Feet * Porosity * (1-Sw). The net pay cutoffs used were porosity > 8% if Pe is > 2.8 (dominantly dolomite), or porosity > 12% if Pe < 2.8 (dominantly sandstone).

Lowest Known Gas Values

The recent production tests were directed at the Amos Wash and Granite Wash zones, reflecting EORI's development strategy of focusing on these two zones while maintaining the Ft. Apache, Basal Raven, and Granite Basement zones as potential longer-term resources. The tests have been water-free, further supporting EORI's theory that previous water-producing tests (such as some of those from the Basal Raven) have resulted from unintended communication with up-hole water-bearing zones. The tests have also demonstrated that the Granite Wash zone is capable of high rates. Table 3 summarizes the pressure data results of these tests. The fact that the new pressure data is on trend with the previous pressure data supports the assumption that these gas resources are contained in reservoirs that are continuous over long distances.

The tests have also supplied additional pressure data. Exhibit 1 is a plot of pressure versus elevation above sea level for all available pressure data (the new data points are in brown). The data has been divided into two groups: Granite Wash and the shallower zones (Raven, Amos Wash, and Ft. Apache). The large symbols are the average values for each data group, and the lines through those symbols are the gas gradients for each group.

To date, no clearly-defined gas-water contact has been observed within the field. Therefore, LKG and inferred GWC values are used to define the limits of the accumulation for each zone. Exhibit 2 is the same pressure plot, with the LKG for the two zones posted, along with a water gradient curve through the PLCC #1 data point. This data point serves as the shallow zones' LKG value for all cases, because no other data is available for those cases indicating the potential for a deeper GWC. For the Granite Wash zone the LKG value of 4,328' from the 11-6-31 test is used in the Low case maps. The water gradient line supplies a potentially deeper value for the Granite Wash zone (4,298' ASL) than that LKG. This value is used in the Medium case. An even-deeper Granite Wash LKG value can be inferred from the fact that the apparently fractured Basal Granite has been open to production down to 4,209' ASL in the 11-6-31 well, which tested water-free. This value is

Mr. Barry D. Lasker St. Johns Field Evaluation June 12, 2008 Page 5 of 7

used in the High case. Table 4 presents the LKG/GWC assumptions for the three cases, and compares them to the assumptions used in the 1999 report.

Concentration Maps

The gas composition data from all wells was examined, and spurious data was eliminated. Both He and CO₂ compositions were found to vary aerially, rather than by zone, as previously assumed. Table 5 lists the composition data for wells with more than one tested zone. The valid He and CO₂ composition data (Table 6), averaged by zone for those wells with multiple tests, resulted in the He and CO₂ compositions (Table 7). The deleted data is presented in Table 8, and the maps are presented in Exhibits 3 and 4. The He concentration is highest in the north, while the CO₂ concentration is highest in the south. These variations in composition, if confirmed through additional drilling, may permit optimization of the development plan by allowing initial field development and facilities to be designed for the relatively He-rich gas in the northern part of the field. Later development and facility additions would then handle the leaner gas in the south.

Type Curve Revisions

The type curves used to forecast production for a given 640-acre area of the field have been revised for several reasons. First, EORI has revised their development plans in two ways. Initial development wells will independently target the Amos Wash and Granite Wash zones. This is appropriate given the different pressures and productivities of the two zones. Therefore, separate type curves have been developed for each zone. Also, development plans were changed from the previous 640-acre development with optional 320-acre wells to field-wide application of 160-acre well spacing. This evaluation assumes the 320-acre wells are drilled four years after the 640-acre well, and the 160-acre wells are drilled four years after the 320-acre wells. Further review may indicate that more-rapid development is justified. The model, which contains geologically continuous layers, does not by itself demonstrate the benefit of 160-acre drilling in the Granite Wash. However, Cobb & Associates considers the use of 160-acre drilling to be a reasonable assumption, because it accounts for the likely presence of reservoir heterogeneity that will eventually justify well spacing tighter than either 640 acres or 320 acres. The tighter well spacing also maximized deliverability to the facility for a given developed area, and accelerates the ultimate recovery of the field's gas.

Next, the models' reservoir descriptions were modified to better match our current understanding of field geology. The Granite Wash tests have demonstrated extremely high productivities, with wells routinely testing at over 1.0 MMCF/D. The Granite Wash model was adjusted to the permeability-thickness values obtained from these high productivity tests, and to the higher initial Granite Wash zone pressure, and both models were adjusted to the higher average porosity-thickness values. These changes result in more-rapid production and higher percent depletion of the Granite Wash zone than the Amos Wash zone.

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Mr. Barry D. Lasker St. Johns Field Evaluation June 12, 2008 Page 6 of 7

Finally, simulated well productivity has been adjusted to account for potential improvements in completion efficiency, and for changes in planned production tubing diameter. Two cases were run for each zone, a skin equals 20 case (damaged), based on the supplied analyses of the pressure buildup tests, and a skin equals 6.0 case (less damaged), based on the assumption that completion practices will continue to improve. The impact of large-diameter casing was evaluated by creating tubing curves for both small (3.0-inch ID) and the currently-planned large (6.366-inch ID) tubing. Exhibits 5 and 6 show that, while pressure drop is a factor with the small tubing, it is insignificant with the large tubing.

Exhibits 7 through 12 summarize the rates and cumulative recovery simulation results, and Exhibit 13 shows the new type curves for the two zones. As seen in Exhibit 11, the lower-permeability Amos Wash zone shows greater infill rate benefits than the higher-permeability Granite Wash, but, as previously noted, the models assume 100 percent continuity. As shown in Exhibit 13, the higher permeability in the Granite Wash zone results in significantly higher percent depletion after 20 and 40 years of production.

Zone and Field Maps

Nine separate maps were created for each of the three zones to effectively delineate IGPT spatially and result in reasonable estimates of OGIP in the Unit area. These maps were: structure top, gross thickness, net-to-gross ratio, net thickness, porosity, Sw, total IGPT, Helium (He) IGPT, and Carbon Dioxide (CO₂) IGPT. All nine maps for each individual zone are included in Appendix A. Large scale versions of the maps have been transferred separately to EORI and are not included in this report. Previously, a structure map of the shallow Glorieta aquifer was also constructed to incorporate the large number of the water wells in the field area into the sparse structural control at the CO₂ bearing levels. The deeper structure was tied to shallow Glorieta control by subtracting the gross interval between the Glorieta and Ft. Apache; subsequent interval isopach maps were used to generate all three CO₂ zone structures and allow appropriate placement of individual GWCs.

The GWCs were used to constrain the lateral extent of each final individual IGPT map. Areal locations of the GWCs were used as vertical "cookie-cutters" on initial unconstrained IGPT maps based on the petrophysical input from Table 2. No attempt was made to significantly model a GWC-wedge thinning since the GWCs contain a fair amount of uncertainty at the current level of control. Two additional GWC levels were used to estimate the Middle and High Cases for the Granite Wash Zone.

In-Place and Recoverable Gas Volumes

Based on the maps described above and the appropriate Bg factors, the OGIP volumes of total gas, He, and CO₂ at standard conditions were calculated. The 20-year and 40-year recovery factors from the type well simulations were then applied against these volumes to estimate the volumes of gross recoverable total gas, He, and CO₂ within the Unit. Note that this approach does not account for the time required to develop the field. Also, no economic evaluation has been made to determine if all the gas can be economically

Mr. Barry D. Lasker St. Johns Field Evaluation June 12, 2008 Page 7 of 7

recovered, and no estimation of net volumes to EORI has been made. Table 1 summarizes these results, and Appendix B contains the by-zone and by-case detailed results.

Conclusions

The recent data gathered by EORI continues to support the presence of an extremely large, geologically continuous, and productive He and CO₂ development target at the St. Johns Field, as illustrated by the volumes shown in Table 1.

Cobb & Associates appreciates this opportunity to be of service to EORI. Please let us know if you have any questions regarding this evaluation.

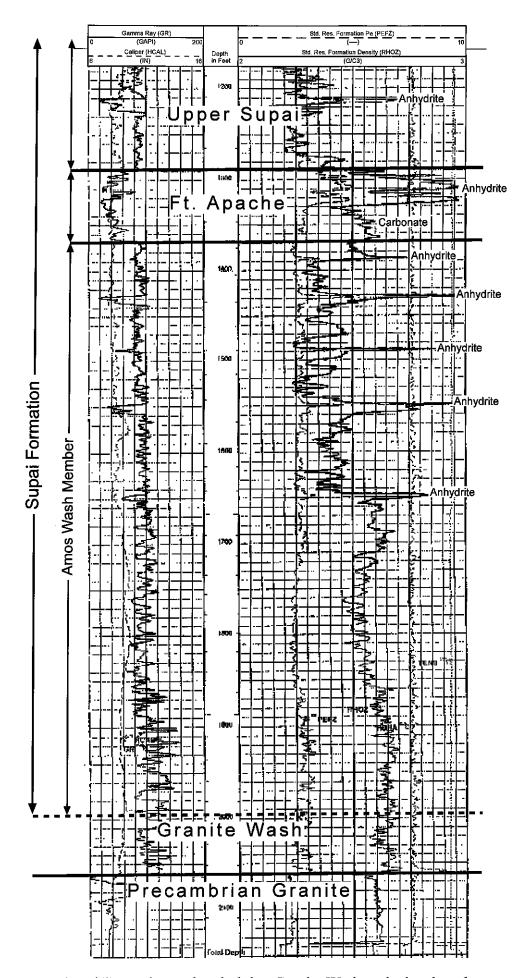
Sincerely,

WILLIAM M. COBB & ASSOCIATES, INC.

Randal M. Brush, P.E. Senior Vice President

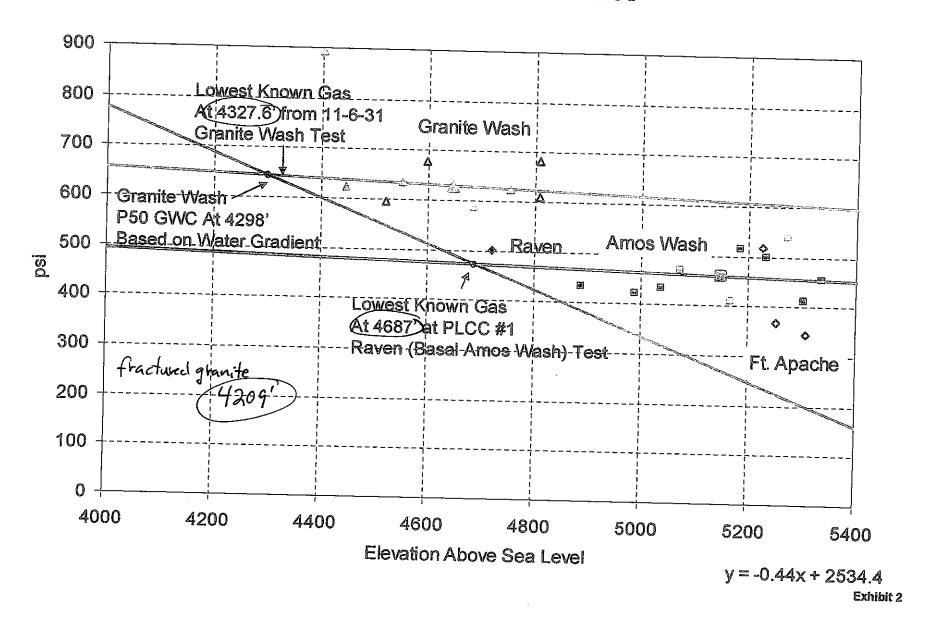
Donald L. Bailey, P.G. Senior Vice President

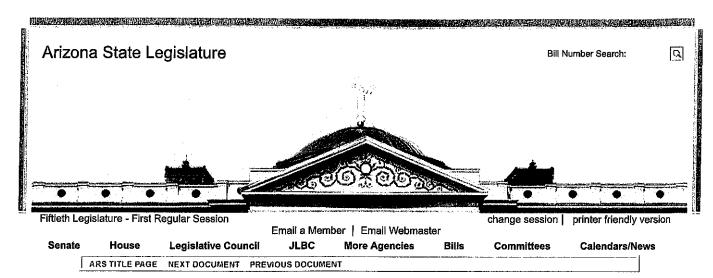
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Supai Formation and underlying Granite Wash as depicted on the gamma-ray density log, Ridgeway Arizona Oil Corporation, 22-1X State well in Sec. 22, T. 12 N., R. 29 E., Apache County, Arizona

St. Johns Reservoir Pressures





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27-504. Drilling units; rules and regulations; exceptions

A. For the prevention of waste, to protect and enforce the correlative rights of owners in a pool, and to avoid augmentation and accumulation of risks arising from drilling an excessive number of wells, or reduced recovery which might result from too small a number of wells, the commission shall, after a hearing, establish a drilling unit or units for each pool. The establishment of a unit for gas shall be limited to the production of gas.

B. Each well permitted to be drilled on a drilling unit shall be drilled under the applicable rules and regulations and in accordance with the applicable spacing pattern prescribed by the commission. Exceptions to the rules and spacing pattern may be granted where it is shown, after notice and hearing, that the unit is partly outside the pool or, for some other reason, a well so located on the unit would be non-productive. Exceptions permitting a proposed well to be drilled on an unorthodox location may be granted on the basis of topography or terrain without notice or hearing.

granted on the basis of topography or terrain without notice or hearing.

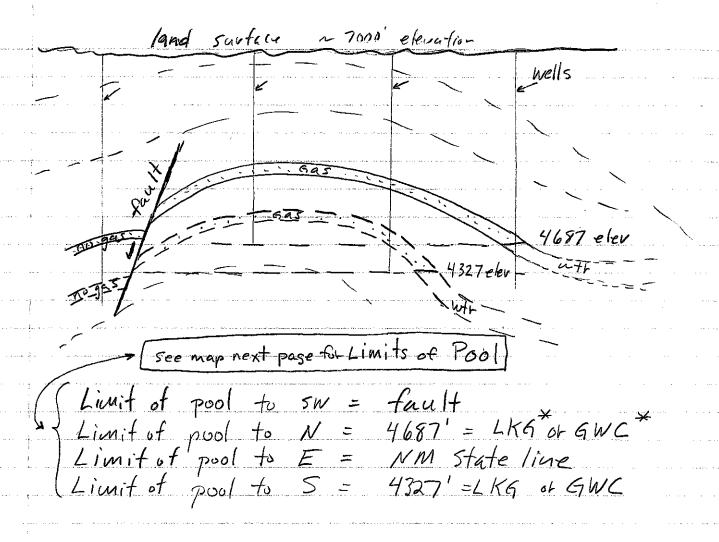
C. If an exception is granted, the commission shall take action which will offset any advantage which the person securing the exception may have over other producers by reason of drilling the well as an exception, and so that drainage from developed units to the tract with respect to which the exception is granted will be prevented or minimized, and the producer of the well drilled as an exception will be allowed to produce no more than a just and equitable share of the oil and gas in the pool.

27-501. Definitions

In this article, unless the context otherwise requires:

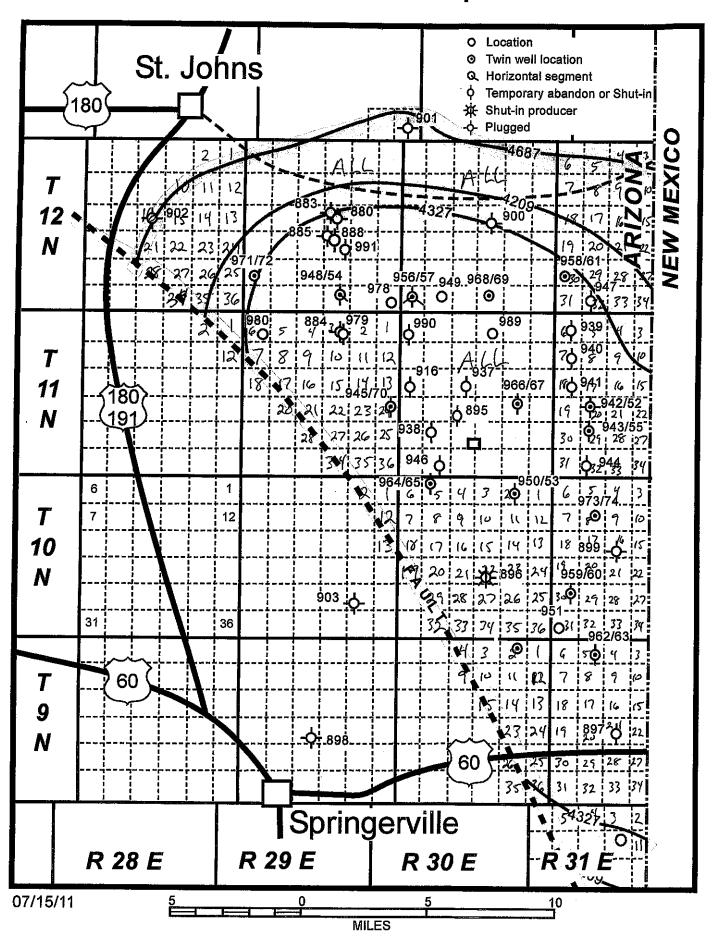
- 6. "Drainage unit" or "drilling unit" means the maximum area in a pool which may be drained efficiently by one well to produce the reasonable maximum amount of recoverable oil or gas in the area.
- 16. "Pool" means an underground reservoir containing a common accumulation of oil or gas, or both, and includes each zone of a general structure completely separated from any other zone in the structure.

Simplified cross-section across geologic structure



ARS 27-501(16) "Pool" means an underground reservoir containing a common accumulation of oil or sas, or both, and includes each zone of a general structure completely separated from any other zone in the structure

Ridgeway Arizona Oil Corporation Wells



Land description for 160-acre spacing units for the production of carbon dioxide and helium gases in the following area (Gila and Salt River Base Line and Meridian):

Township 12 North, Range 28 East: All of Sections 1, 2, 10, 11, 12, 13, 14, 15, 16, 21, 22, 23, 24, 25, 26, 27, 28, 34, 35, and 36

Township 12 North, Range 29 East: All

Township 12 North, Range 30 East: All

Township 12 North, Range 31 East: All of Sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 31, 32, 33, and 34

Township 11 North, Range 28 East: All of Sections 1, 2, and 12

Township 11 North, Range 29 East: All of Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 34, 35, and 36

Township 11 North, Range 30 East: All

Township 11 North, Range 31 East: All of Sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 31, 32, 33, and 34

Township 10 North, Range 29 East: All of Sections 1, 2, 12, and 13

Township 10 North, Range 30 East: All of Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 32, 33, 34, 35, and 36

Township 10 North, Range 31 East: All of Sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 31, 32, 33, and 34

Township 9 North, Range 30 East: All of Sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 23, 24, 25, 26, 35, and 36

Township 9 North, Range 31 East: All of Sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 31, 32, 33, and 34

Township 8 North, Range 31 East: All of Sections 2, 3, 4, 5, and 11

Location and status of Ridgeway Arizona Oil Corp wells in east-central Arizona

Permit	<u>Well</u>	Location Sec-Twp-Rge	Total <u>Depth</u>	Status and comment
880 888 888 8890 8891 8893 8898 8899 9901 9915 9917 9917 9917 9917 9917 9917 991	1 Plateau Cattle 1A Plateau Cattle 3-1 State 22-1 State 22-1 State 10-1 State 11-1 State 11-1 State 11-21 State 11-21 State 10-22 State 9-21 State 9-21 State 10-16-31 State 12-15-30 State 12-15-30 State 12-16-28 State 11-38 State 11-18 State 11-18 State 11-18 State 11-19-30 State 11-06-31 State 11-06-31 State 11-18-31 State 11-18-31 State 11-29-31 State 11-29-31 State 11-29-31 State 11-24-29 State 11-32-30 State 11-23-30 State 11-24-29 State 11-32-30 State 11-23-30 State 11-24-29 State 11-32-31 State 11-23-30 State 11-24-29 State 11-32-31 State 11-20-31x State	Sec-Twp-Rge ne sw 15-12n-29e ne sw 15-12n-29e ne sw 15-12n-29e ne sw 3-11n-29e nw nw 22-12n-29e se nw 22-12n-29e sw ne 10-11n-29e se nw 11-11n-29e se nw 11-11n-29e ne sw 21-11n-30e sw sw 22-10n-30e sw ne 21-9n-31e sw se 22-9n-29e ne sw 16-10n-31e ne sw 16-10n-31e ne sw 16-12n-28e nw sw 26-10n-29e ne nw 28-15n-29e ne nw 28-15n-29e ne sw 33-11n-30e c sw 18-11n-30e nw se 16-11n-31e nw se 07-11n-31e nw se 07-11n-31e se nw 29-11n-31e se nw 29-11n-31e se nw 29-11n-31e se nw 24-11n-29e sw ne 34-12n-29e sw ne 34-12n-29e sw ne 34-12n-30e nw sw 31-10n-31e se nw 20-11n-31e se nw 20-11n-31e se nw 20-11n-31e se nw 31-12n-30e se sw sw 30-12n-31e	2431 ft 220 ft 1813 ft 218 ft 2149 ft not drilled not drilled not drilled ft 2265 ft 2265 ft 2266 ft 3180 ft 2728 ft 2280 ft 2410 ft 2410 ft 2718 ft 1906 ft 1906 ft 1934 ft 1940 ft 1859 ft 1140 ft not drilled not drilled not drilled not drilled ft 1899 ft 1904 ft 1802 ft	Drilled 8/1994, plugged 9/1997 Drilled 11/1994, plugged 11/1997 Drilled 10/1995, plugged 9/2004 Drilled 8/1995, plugged 8/1997 Drilled 6/1997, shut-in 6/1997 Permit expired 4/1997 Permit expired 4/1997 Permit expired 4/1997 Permit expired 4/1997 Drilled 3/1997, shut-in / app to plug Completed 7/2002; shut-in 3/2004 Drilled 3/1997, shut-in / app to plug Drilled 5/1997, plugged 2/2004 Drilled 5/1997, plugged 2/2004 Drilled 5/1997, plugged 7/2008 Drilled 5/1997, plugged 7/2008 Drilled 5/1997, plugged 1/2005 Drilled 5/1997, plugged 1/2005 Drilled 5/1997, plugged 6/1997 Permit expired 10/2004 Drilled 5/2004, temporarily abandoned Permit expired 10/2004 Drilled 3/2007, shut-in Drilled 4/2007, shut-in Drilled 4/2007, temporarily abandoned Drilled 5/2007, temporarily abandoned Drilled 5/2007, temporarily abandoned Drilled 5/2007, temporarily abandoned Drilled 3/2007, shut-in Drilled 3/2007, temporarily abandoned Drilled 2/2008, plugged 2/2008 Drilled 2/2008, plugged 2/2008, blow out Permit expired 7/2008 Drilled 2/2008, temporarily abandoned Drilled 2/2008, temporarily abandoned Drilled 2/2008, temporarily abandoned Drilled 2/2008, temporarily abandoned Drilled 3/2008, temporarily abandoned
958 959 961 962 963 964 966 967 971 978 978 979 989 991	10-29-31 State 10-29-31x State 12-30-31x State 09-05-31 State 09-05-31 State 10-05-30 State 10-05-30 State 11-23-30 State 11-23-30 State 11-23-30x State 12-34-30 State 12-34-30 State 12-34-30 State 12-30-29 State 12-30-29 State 10-08-31 State 10-08-31 State 10-08-31 State 11-03-29 State 11-03-29 State 11-03-29 State 11-03-30 Fee 11-06-30 State	sw sw 30-12n-31e sw ne 29-10n-31e sw ne 29-10n-31e nw se 05-09n-31e nw se 05-09n-31e nw nw 05-10n-30e nw nw 05-10n-30e nw ne 23-11n-30e se nw 34-12n-30e se nw 34-12n-30e se nw 34-12n-30e sw ne 24-11n-29e ne sw 30-12n-29e ne sw 30-12n-29e ne sw 30-12n-29e ne se 03-11n-30e ne se 03-11n-29e ne se 03-11n-30e ne se 22-12n-29e	not drilled 4202 ft not drilled not drilled 122 ft 2969 ft 2600 ft not drilled 2550 ft not drilled	Permit expired 8/2008



Arizona Oil & Gas Commission 416 West Congress, Suite 100 Tucson, AZ 85701

Attn:

Mr. Steve Rauzi

Administrator

RE:

Affidavit of Publication

& Notices to Other Lessees

Dear Mr. Rauzi:

Enclosed please find you copy of the Affidavit of Publication for Ridgeway's request for a hearing regarding our Application for 160 acre spacing within the St Johns Gas Unit.

rio 6-30-11

I have also enclosed copies of the letters and Delivery Confirmation Receipts for the other three Lessees of record, within the St Johns Gas Unit.

If you have any questions, please feel free to contact me at 928-337-3230.

Respectfully submitted,

Carmen Tanner
Office Manager

Enclosures

LEGAL NOTICE: NOTICE OF HEARING CASE NO. 70

Posted: Tuesday, June 21, 2011 5:00 am

Oil and Gas Conservation Commission, State of Arizona; 416 West Congress Street, Suite 100; Tucson, Arizona 85701; Phone 520-770-3500.

Notice is hereby given to all interested parties that the Oil and Gas Conservation Commission will hold a hearing open to the public beginning at 10:00 a.m. on July 15, 2011, in room 321 of the State Land Department Building located at 1616 West Adams Street, Phoenix, Arizona 85007.

The Commission will consider the Application of Ridgeway Arizona Oil Corporation to drill and produce carbon dioxide gas wells on 160-acre spacing units in the St. Johns Gas Unit, located in Townships 9, 10, 11, and 12 North, Ranges 28, 29, 30, and 31 East, Apache County, Arizona. The Producing zones to be spaced are within the Permian Supai Formation and underlying Granite Wash.

Authority for this action is contained in A.R.S. § 27-516(A)(12) and A.A.C. R12-7-107. The public may review materials submitted in support of this request at the office of the Oil and Gas Program Administrator, Arizona Geological Survey, 416 W. Congress Street, Suite 100, Tucson, Arizona 85701.

Interested parties will have the opportunity to be present and to be heard during the hearing.

OIL AND GAS CONSERVATION COMMISSION

/s/ Steven L. Rauzi

Steven L. Rauzi

Oil and Gas Program Administrator

Dated this 15th day of June 2011 at Tucson,

Arizona

Published in the White Mountain Independent June 21, 2011 (WMI 5468 T, 1x, 6/21/11)

State of Arizona)
)ss.
County of Navajo)

Affidavit of Publication

White Mountain Independent

I, Diane R. Janot being first duly sworn, depose and say: I am the agent of the White Mountain Publishing Company, publisher of the White Mountain Independent, a semi-weekly newspaper of general circulation published at Show Low, County of Navajo, Arizona and that the copy hereto attached is a true copy of the advertisement as published in the White Mountain Independent on the following dates:

June 21, 2011

LEGAL NOTICE NOTICE OF HEARING CASE NO. 70

CASE NO. 70
Oil and Gas Conservation Commission, State of Artzona; 416 West Congress Street, Sulte 100, Tucson, Artzona 85701; Phone 520-770-3500.
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85701.
Interested parties will have the opportunity to be present and to be heard during the hearing.
OIL AND GAS CONSERVATION COMMISSION VS/Steven L: Rauzi.
Steven L: Rauzi.
Oil and Gas Program Administrator.

Oil and Gas Program Administrator Dated this 15th day of June 2011 at Tucson, Arizona

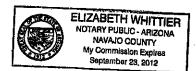
Published in the White Mountain Independent June 21, 2011 (WMI:5468 Talx:5/21/11)

White Mountain Independent

Sworn to me this day of

June 22, 2011, A.D

Notary Public



INVOICE

White Mountain Publishing Co.

White Mountain Independent Wampum Saver Mountain Skies White Mountain Realty Guide Offices in Show Low, Springerville and St. Johns P.O. Box 1570 • Show Low, Arizona 85902 • (928) 537-5721

(Please Include LEGAL NUMBER with Payment)

Ridgeway Arizona Oil Corp.

Attn: Carmen Tanner

P.O. Box 1110

St. Johns, AZ 85936

Account No. 67164P

Legal #5468 Date: June 14, 2011

Last Run Date: June 10, 2011

Equipment to do Fine Printing - Craftsmen who do it

Serving Navajo and Apache Counties

QUANTITY	DESCRIPTION	··	. .	PRICE
Re: Legal N	Notice – Notice of Hearing – Case No. 70			
1 run @ 4"	Legal Publication @ \$8.02 per inch	\$	32.08	
	2% Tax		<u>.65</u>	
	Total	\$	32.73	
Paid with cre	edit card on 6/15/11	(\$	32.73)	

Thank you for ordering this legal advertising inserted in The White Mountain Independent.

Affidavits* Mailed

*There will be a \$20 charge (for 2) additional or replacement affidavits



Hunt Oil U.S.A. 1445 Ross AT Field Dallas, TX 75202

Delivery Confirmation Receipt 03101230000128083893

Attn:

Mr. Bill Rex

RE:

Amended Application for 160 acre spacing for the St Johns Gas Unit

Dear Mr. Rex:

Pursuant to Arizona Rule 12-7-107, please be advised that Ridgeway Arizona Oil Corp. has formally amended it's application to the Arizona Oil & Gas Commission for 320 acre spacing to 160 acre spacing, within the St Johns Gas Unit.

Enclosed please find a copy of our application for your records. If you have any questions, please feel free to contact this office at 928-337-3230.

Sincerely

Thomas White

Field Operations Manager

Enclosure

CC:

Arizona Oil & Gas Commission



Ms Elaine Rogers P O Box 701 Alpine, AZ 85920

Delivery Confirmation Receipt 03101230000128083886

Attn:

Ms. Rogers

RE:

Amended Application for 160 acre spacing for the St Johns Gas Unit

Dear Ms. Rogers:

Pursuant to Arizona Rule 12-7-107, please be advised that Ridgeway Arizona Oil Corp. has formally amended it's application to the Arizona Oil & Gas Commission for 320 acre spacing to 160 acre spacing, within the St Johns Gas Unit.

Enclosed please find a copy of our application for your records. If you have any questions, please feel free to contact this office at 928-337-3230.

Thomas White

Field Operations Manager

Enclosure

Sincerel

cc:

Arizona Oil & Gas Commission



SPO Land & Cattle Co LLC 26602 West Hwy 85 Buckeye, AZ 85326

Delivery Confirmation Receipt 03101230000128083862

Attn:

Ms. Sidney Maddock

RE:

Amended Application for 160 acre spacing for the St Johns Gas Unit

Dear Ms. Maddock:

Pursuant to Arizona Rule 12-7-107, please be advised that Ridgeway Arizona Oil Corp. has formally amended it's application to the Arizona Oil & Gas Commission for 320 acre spacing to 160 acre spacing, within the St Johns Gas Unit.

Enclosed please find a copy of our application for your records. If you have any questions, please feel free to contact this office at 928-337-3230.

Thomas White

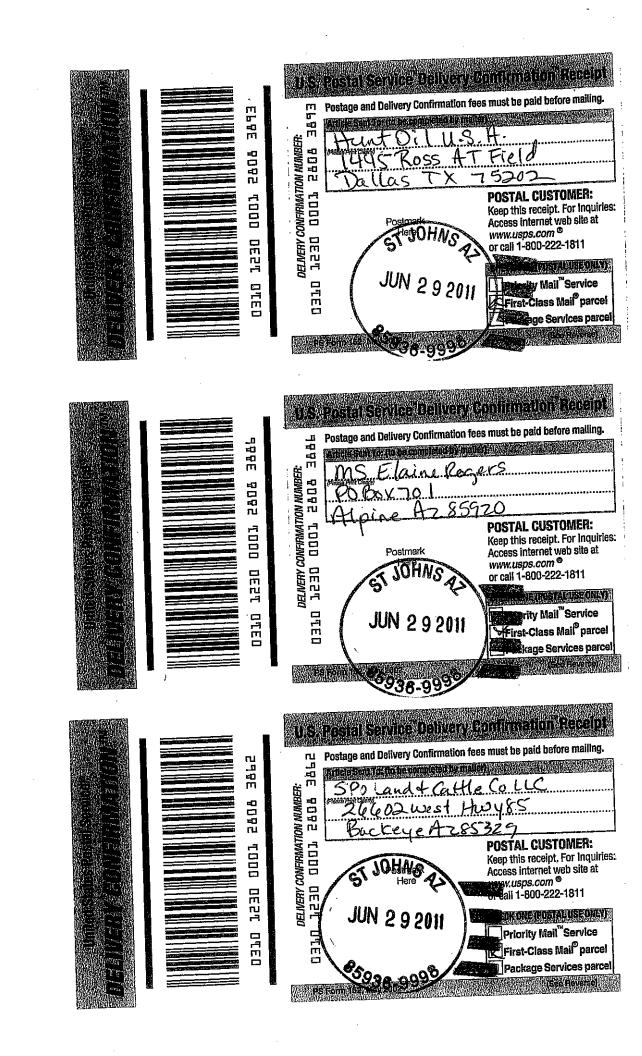
Sincerely

Field Operations Manager

Enclosure

cc:

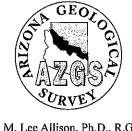
Arizona Oil & Gas Commission





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

July 7, 2011

To:

Oil and Gas Conservation Commissioners

SUR.

From: Steven L. Rauzi, Oil and Gas Administrator

Re:

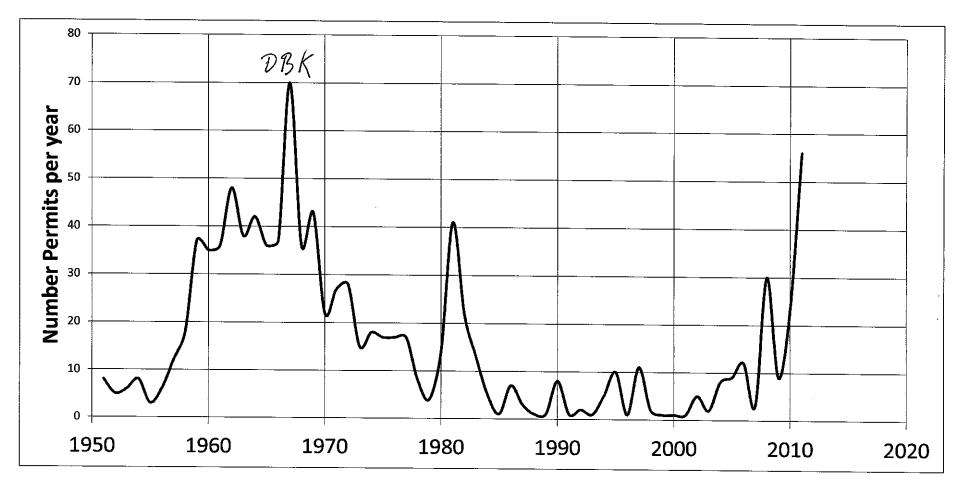
Report about permits and drilling activity for the July 15, 2011, Meeting

Thirty three new drilling permits were issued and 31 wells were drilled since your last meeting on April 15, 2011. Three companies have drilled a total of 41 stratigraphic wells since the beginning of the year. Southwest Exploration/Passport Potash drilled 19 wells at its potash project west and southwest of Petrified Forest National Park near Holbrook. Passport has two rigs working in its ongoing drilling program. HNZ Potash drilled 15 stratigraphic wells southwest and east of Petrified Forest National Park. HNZ has one rig working in its ongoing drilling program. American West Potash drilled seven wells at it potash project east of Petrified Forest National Park. American West has two rigs working in its ongoing drilling program. A permit is required from the Oil and Gas Conservation Commission for the potash test wells because the holes penetrate the Coconino sandstone, a potential helium reservoir in the area of the Petrified Forest National Park.

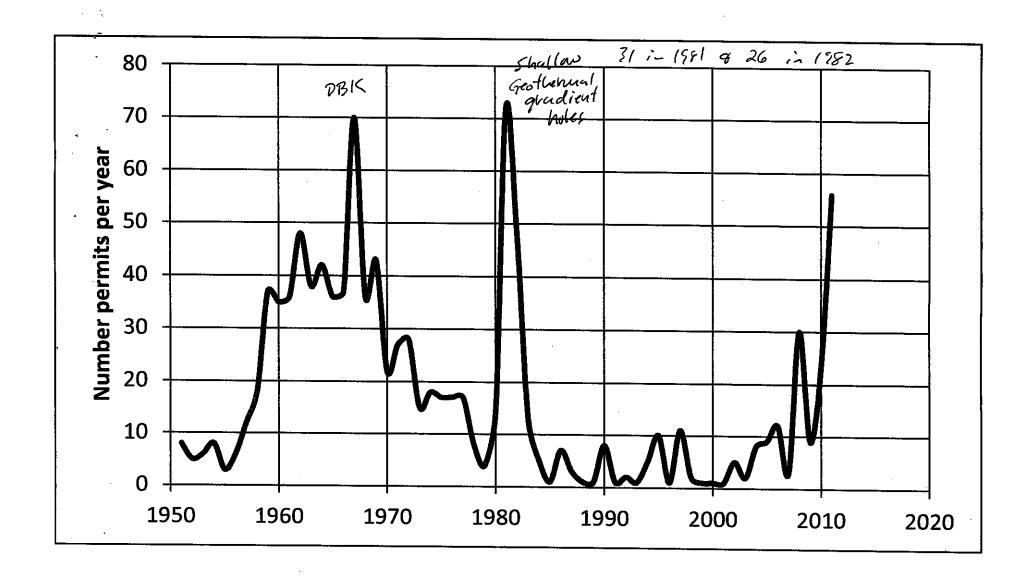
All three companies are setting surface casing above the salt to shut off and protect water in the upper Coconino Sandstone. They are setting a cement plug across the casing shoe and up into the lower Coconino to isolate the underlying salt section after abandonment. Either the ranch manager or representative of the ranch manager is preparing and reclaiming the roads and locations. The drilling is having minimal impact.

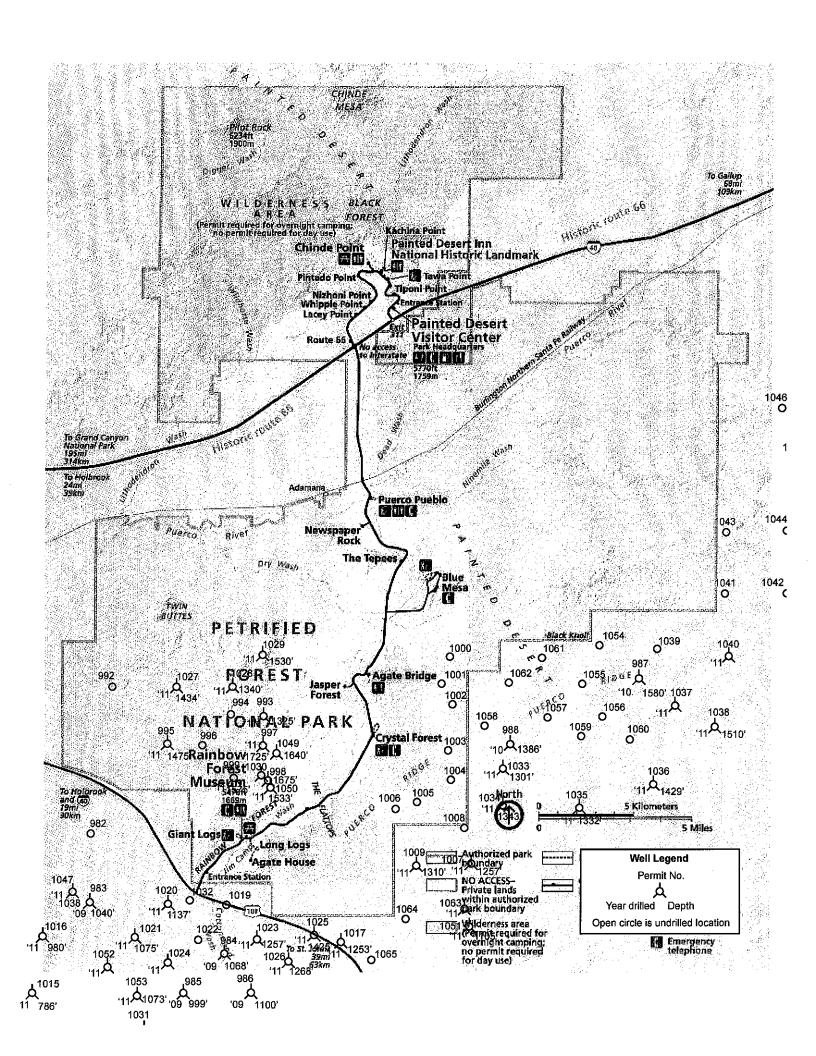
Arizona Natural Gas Storage (ANGS) requested the Federal Energy Regulatory Commission (FERC) to terminate its pre-filling review process regarding its proposed natural gas storage facility in the Picacho Basin. ANGS determined that the financial viability of the project is questionable at this time.

Ridgeway Arizona Oil Corporation has requested 160-acre spacing for its wells in the St. Johns-Unit. The hearing is scheduled under agenda item 4 of the July 15 meeting.



Excludes shallow seathermal gradient holes in 1981 4 1982





11-82-9

Cash Securities Held by Arizona Geological Survey in Agency Fund									
Date	Effective date	Operator	-	org. Amouπt	Forfeited Bond	Amount			
5/21/1973		American Fuels	\$	25,000.00		25,000.00			
8/1991		United Gas		,	\$ 5000-4395.28	604.72			
1/1994		Contender			\$ 5,000.00	5,000.00			
6/15/1995		Arzon Corp	\$	10,000.00		10,000.00			
4/17/2002		Aquila	\$	10,000.00		10,000.00			
5/24/2004	6/18/2004	Salt Grass	\$	10,000.00		10,000,00			
3/20/2009	3/31/2009	Wilcox Oil & Gas Bond	\$	10,000.00		10,000.00			
5/5/2009	5/11/2009	SW Exploration	\$	25,000.00		25,000.00			
1/28/2011	1/28/2011	SW Exploration	\$	25,000.00		25,000.00			
4/19/2011	4/19/2011	American West Potash LLC	\$	50,000.00		50,000.00			
			ļ						
	Total Amount in Agency Fund		.\$	165,000.00	\$ 5,604.72	\$ 170,604.72			
			ni=300000	P. Deck and Control of the Control o					
			trea						
Date	Operator			Bank	CD Number	Amount			
7/7/1994 Ridgeway Arizo				Bank One	4002111	\$ 10,000.00			
11/28/1994	Ridgeway Arizo	-	+-	Bank One	4002112	\$ 15,000.00			
8/19/2004	Holbrook Ba		+-	nk of America	91000053487715	\$ 10,000.00			
	Holbrook Ene		Ba	nk of America	91000057645689	\$ 10,000.00			
9/20/2004	Holbrook Ene		Bank One		0100000927604	\$ 10,000.00			
5/23/2006	Ridgeway Arizo	na Oil Bank of the West		nk of the West	631-852068	\$ 25,000.00			
100	 	easurer (Case Service)				S 80,000.00			
		S							
galacian distribution		Stress Savourentes ex	ORGS						
Operator		Bond Company	Ron	d Number	Remark				
	APS	Liberty Mutual Insurance			P/N 929	Amount \$25,000.00			
	Coleman Oil & Gas	(BIA Bond)	+		Ltr. Credit 564	None to State			
	El Paso Natural Gas	Liberty Mutual Insurance	1	23-007-048	P/N925	\$25,000,00			
	Elm Ridge Resources	(BIA Bond)	+-	Bia B05973	EBB wells	None to State			
	Enterprise Products	Liberty Mutual Insurance	-	22-018-498	P/N 778	\$50,000.00			
	Gruy Petroleum	RLI Insurance Co.	+-	ILB0007431	P/N 920	\$25,000.00			
	HNZ Potash	Fidelity of Maryland	+	M08800239	P/N 1000	\$50,000.00			
	Mountain States Petroleum	(BIA Bond)	1	·	DBK wells	None to State			
	Plains LPG Services LP	RLI Insurance Co.	F	LB0010111	Blanket	\$25,000.00			
	Premco Western	(BLM Bond)	1		P/N 889	None to State			
	Rim Southwest Corp	(BIA Bond)			P/N 882	None to State			
	ijota) Amount + apilin Succey Bonds Pa	age de general				340000000			
	Total Amount Held in Agency	_							
	Total Amount Held by State Tre	+			\$ 80,000.00				
	Total Amount Held in Surety Bonds Pa		+			\$ 170,604.72			
	Total Active Surety + Non-Surety Bonds He	·	╁		<u> </u>	\$ 200,000,000			
Total Active durety + Nort-Jurety Bonds neid September 2010						\$ 450,604.72			

A06(C Meeting 7-15-11

Mame
Then White
Too Dixon
Carmen Tanner
Jamie Hagne

Representing
Ridgeway
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Ridgeway