

RIDGEWAY 35-1 STATE  
NE SW 35-12N-29E (890)



STATE: ARIZONA  
COUNTY: APACHE  
API 02-001-20302  
FIELD: UNNAMED

12N-29E 35  
NE SW  
1660 FSL 1660 FWL  
STATUS: AB-LOC

OPR: RIDGEWAY ARIZONA OIL 35-1 RIDGEWAY STATE

ELEV: 6689 GR  
(VERTICAL)  
PROJ DEPTH/EM: 2500 FORT APACH PERMIT #890

LOC DESCRIPTION: 3/4 MI NE FORT APACHE CO2 DISC SE 3-11N-29E UNNAMED 10 1/2 MI SE ST JOHNS,  
AZ; LAT: 3438117 LONG: 10924892;  
OPER ADD: 1080 700 4TH AVE SW, CALGARY ALB T2P 3J4, PHONE (800) 347-0294;

COPYRIGHT 1997 PETROLEUM INFORMATION/DWIGHTS LLC

DATE 09/15/97 CARD # 00003-F COR



# PERMIT TO DRILL

This constitutes the permission and authority from the  
**OIL AND GAS CONSERVATION COMMISSION,  
STATE OF ARIZONA,**

To: RIDGEWAY ARIZONA OIL CORPORATION  
(OPERATOR)

to drill a well to be known as

RIDGEWAY STATE #35-1  
(WELL NAME)

located 1660' FSL & 1660' FWL

Section 35 Township 12N Range 29E, APACHE County, Arizona.

The +/- 640 ACRES of said

Section, Township and Range is dedicated to this well.

Said well is to be drilled substantially as outlined in the attached Application and must be drilled in full compliance with all applicable laws, statutes, rules and regulations of the State of Arizona.

Issued this 17 day of OCTOBER, 1995

**OIL AND GAS CONSERVATION COMMISSION**

By Steven L. Ramirez  
**EXECUTIVE DIRECTOR**  
OIL & GAS PROGRAM ADMINISTRATOR

PERMIT 00890

RECEIPT NO. 3085

A.P.I. NO. 02-001-20302

State of Arizona  
Oil & Gas Conservation Commission  
Permit to Drill  
FORM NO. 27

**APPLICATION FOR PERMIT TO DRILL OR RE-ENTER**

APPLICATION TO DRILL

RE-ENTER OLD WELL

**RIDGEWAY ARIZONA OIL CORPORATION**

NAME OF COMPANY OR OPERATOR

1080, 700 4TH AVENUE S. W.                      CALGARY                      ALBERTA T2P 3J4  
Address    City    State

Aztec Well Service

Drilling Contractor  
 P.O. Box 100 Aztec, NM 87410

Address

**DESCRIPTION OF WELL AND LEASE**

Federal, State or Indian Lease Number, or if fee lease, name of lessor State Lease #13-53955	Well number 35-1	Elevation (ground) 6689
Nearest distance from proposed location to property or lease line: 1660 feet	Distance from proposed location to nearest drilling, completed or applied—for well on the same lease: First well on lease                      feet	
Number of acres in lease: 640	Number of wells on lease, including this well, completed in or drilling to this reservoir: One	
If lease, purchased with one or more wells drilled, from whom purchased: Name                      Address		
Well location (give footage from section lines) 1660 F/SL & 1660 F/WL	Section—township—range or block and survey Sec. 35 T12N R29E G&S.R.M.	Dedication (Comply with Rule 105) 640 acres
Field and reservoir (if wildcat, so state) Wildcat Ft. Apache	County APACHE	
Distance in miles, and direction from nearest town or post office 7 miles SE of St. Johns, AZ		
Proposed depth: 2500'	Rotary or cable tools Rotary	Approx. date work will start Nov. 1, 1995
Bond Status on file Amount \$25,000	Organization Report On file X                      Or attached	Filing Fee of \$25.00 Attached X

Remarks: Well Name: Ridgeway State #35-1  
 Ridgeway Arizona proposes to drill this well according to the attached drilling plan

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Agent of the Ridgeway Arizona Oil Corporation (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

APL # 02-001-20302                      Alan P. Emmerhofer  
 Signature                      Oct. 6, 1995  
 Date

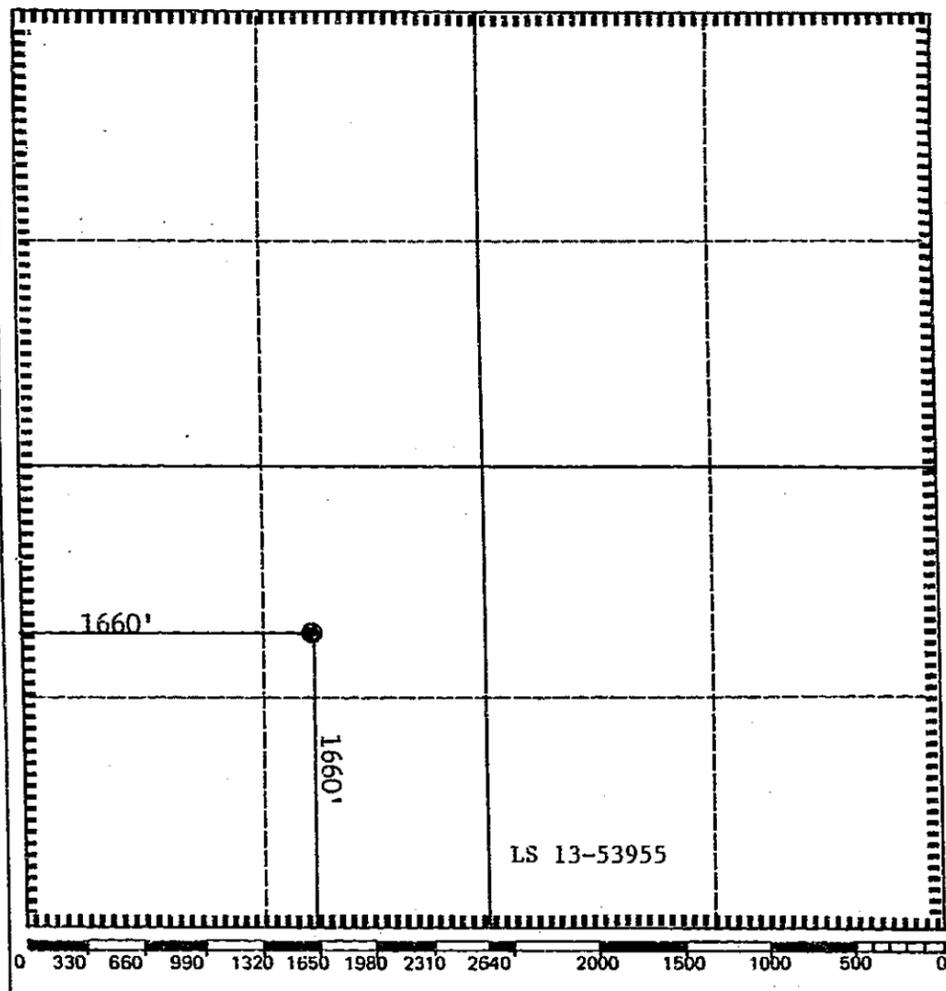
Permit Number: **890**  
 Approval Date: **OCT 17 1995**  
 Approved By: Steven L. Rainey  
 Notice: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.

STATE OF ARIZONA  
 OIL & GAS CONSERVATION COMMISSION  
 Application to Drill or Re-enter  
 File Two Copies

Form No. 3

- Operator shall outline the dedicated acreage for both oil and gas wells on the plat.
- A registered professional engineer or land surveyor registered in the State of Arizona or approved by the Commission shall show on the plat the location of the well and certify this information in the space provided.
- ALL DISTANCES SHOWN ON THE PLAT MUST BE FROM THE OUTER BOUNDARIES OF THE SECTION.
- Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES \_\_\_\_\_ NO  .
- If the answer to question four is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES  NO \_\_\_\_\_. If answer is "yes," Type of Consolidation Operating Agreement
- If the answer to question four is "no," list all the owners and their respective interests below:

Owner		Land Description
RIDGEWAY ARIZONA OIL CORPORATION	80%	Sec 35, T12N-R29E
Frank L. Shogrin	20%	Apache County, Arizona



**CERTIFICATION**

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

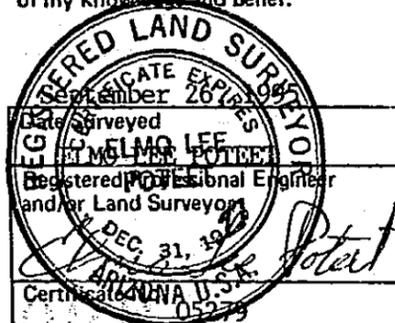
*Alan P. Emmendorfer*  
Name  
Alan P. Emmendorfer

Position  
Agent

Company  
Ridgeway Arizona Oil Corp.

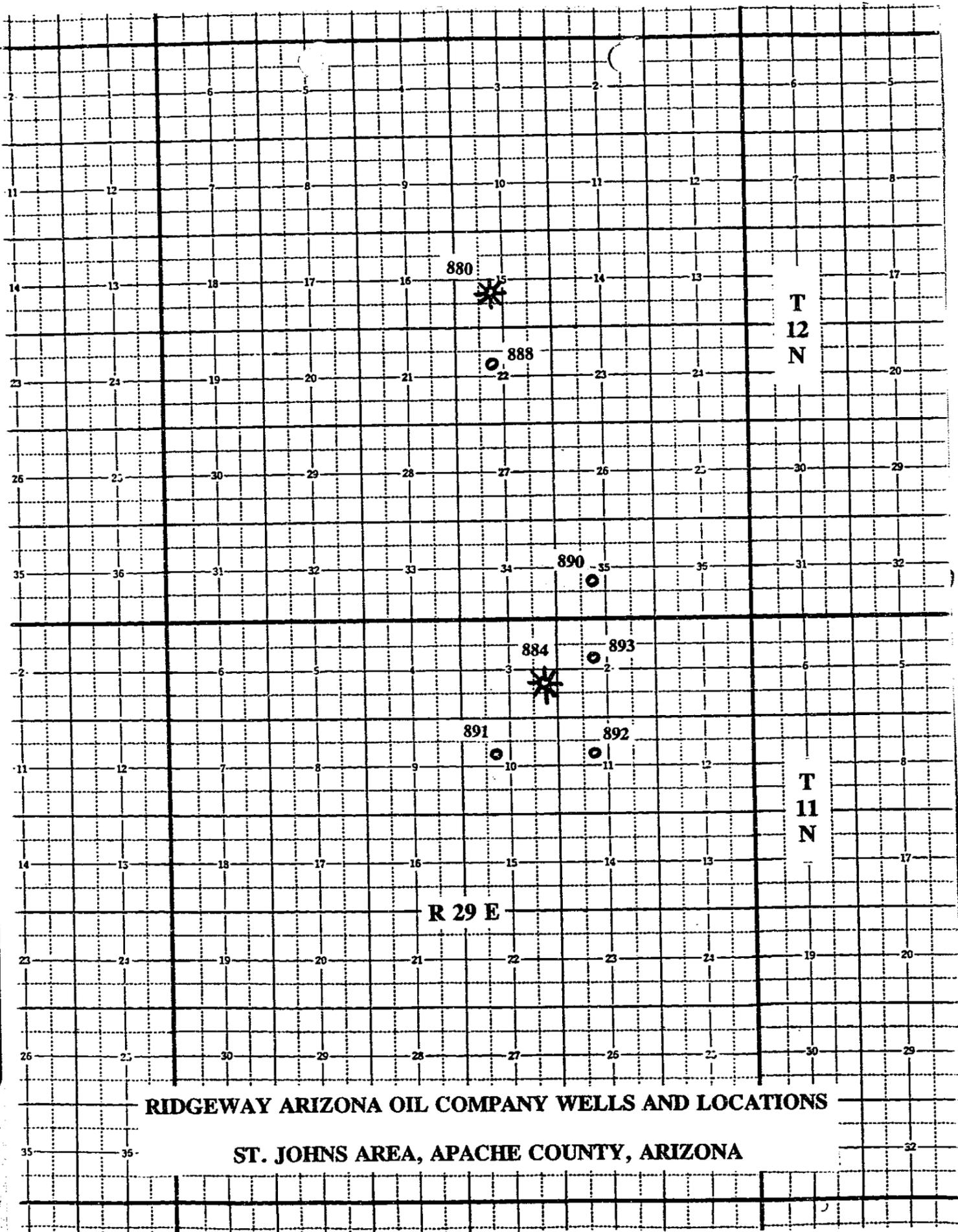
Date  
October 6, 1995

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



**PROPOSED CASING PROGRAM**

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement	Type
7"	20#	K-55	0	820'	820'	100	G Metasilicates
4 1/2"	10.5#	K-55	0	2500'	2500'	304	G w/ Additives



**RIDGEWAY ARIZONA OIL COMPANY WELLS AND LOCATIONS**

**ST. JOHNS AREA, APACHE COUNTY, ARIZONA**

RIDGEWAY ARIZONA OIL CORPORATION  
DRILLING PROGNOSIS

DATE: October 5, 1995

WELL NAME: Ridgeway State #35-1  
LOCATION: 1660' FSL & 1660' FWL  
Sec 35, T12N-R29E  
Apache County, Arizona

FIELD: WILDCAT

ELEVATION: 6689' (Ground)  
TOTAL DEPTH: 2500'

SURFACE: State  
MINERALS: State #13-53955

1. GEOLOGY:

A. FORMATION TOPS:

Richville	Surface	Ft. Apache	1515'
Chinle	30'	Base Ft. Apache	1890'
San Andres	315'	Granite Wash	2260'
Glorietta	630'	Granite	2480'
Supai	800'	TOTAL DEPTH	2500'

B. LOGGING PROGRAM: Dual Laterlog, Spectral Density and Dual Spaced Neutron from TD to surface casing, Gamma Ray from TD to surface.

C. NATURAL GAUGES: Gauge any noticeable increases in gas or water flows. Record all gauges in Tour book and on morning reports.

D. DST: No Dst's are planned but may be run if conditions warrant.

2. DRILLING:

A. MUD PROGRAM: Spud mud from surface to 750'. KCL mud system from 750' to TD.

B. BOP TESTING: While drill pipe is in use, the pipe rams will be tested once each day. The blind rams will be tested once each trip. The drum brakes will be inspected and tested each tour. All tests and inspections will be recorded in the tour book as to time and results.

3. MATERIALS:

A. CASING PROGRAM:

CASING TYPE	HOLE SIZE	DEPTH	CASING SIZE	WT & GRADE
Surface	8 3/4"	820'	7"	20# K55
Production	6 1/4"	2500'	4 1/2"	10.5# K55

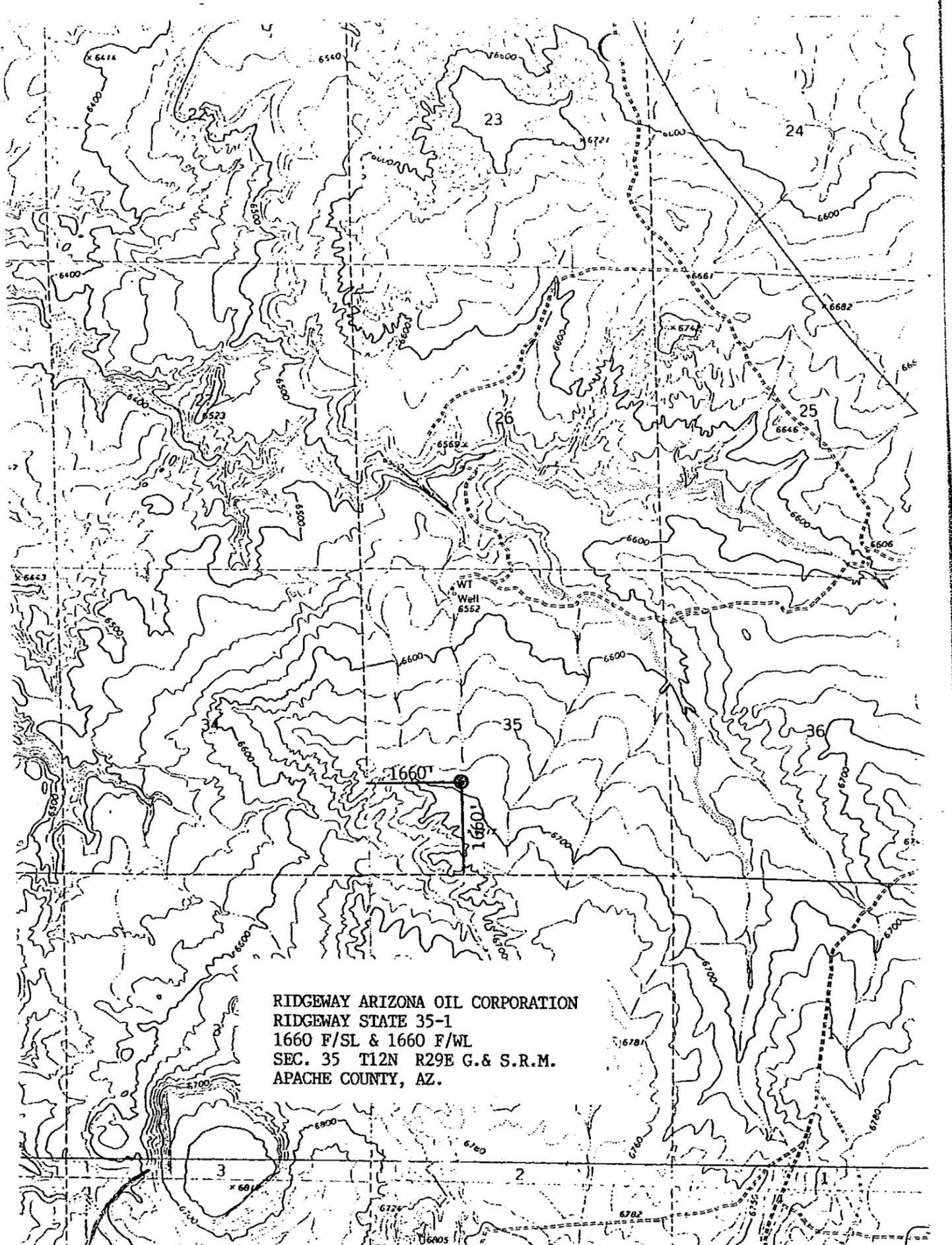
Drilling Prognosis  
Ridgeway Arizona Oil Corporation  
Page 2

**B. FLOAT EQUIPMENT:**

1. **SURFACE CASING:** 7" cement nose guide shoe with a self-fill insert float. Place float one (1) joint above the shoe and four (4) slim hole centralizers. Reciprocate pipe while cementing.
2. **PRODUCTION CASING:** 4 1/2" Whirlar type cement nose guide shoe with a float collar one (1) joint above shoe. Place seven (7) slim hole centralizers.

**C. Cementing:**

1. **SURFACE:** 100 sx (135 cuft) of Class "G" w/2% metasilicate and 1/4# cello-flake/sx (Yield = 2.04 cuft/sx, weight = 12.1#/gal). Use 50% excess to circulate to surface. WOC 12 hours. Run a temperature survey after 8 hours if cement is not circulated. Test to 1500#.
2. **PRODUCTION:** 304 sx (374 cuft) of Class "G" with 4% gel, 6 1/4# fine gilsonite/sx and 0.8% fluid loss (Yield = 1.73 cuft/sx, weight = 13.5#/gal). Use 50% excess to circulate to surface. Run a temperature survey after 8 hours to determine TOC behind the 4 1/2" casing if cement is not circulated.



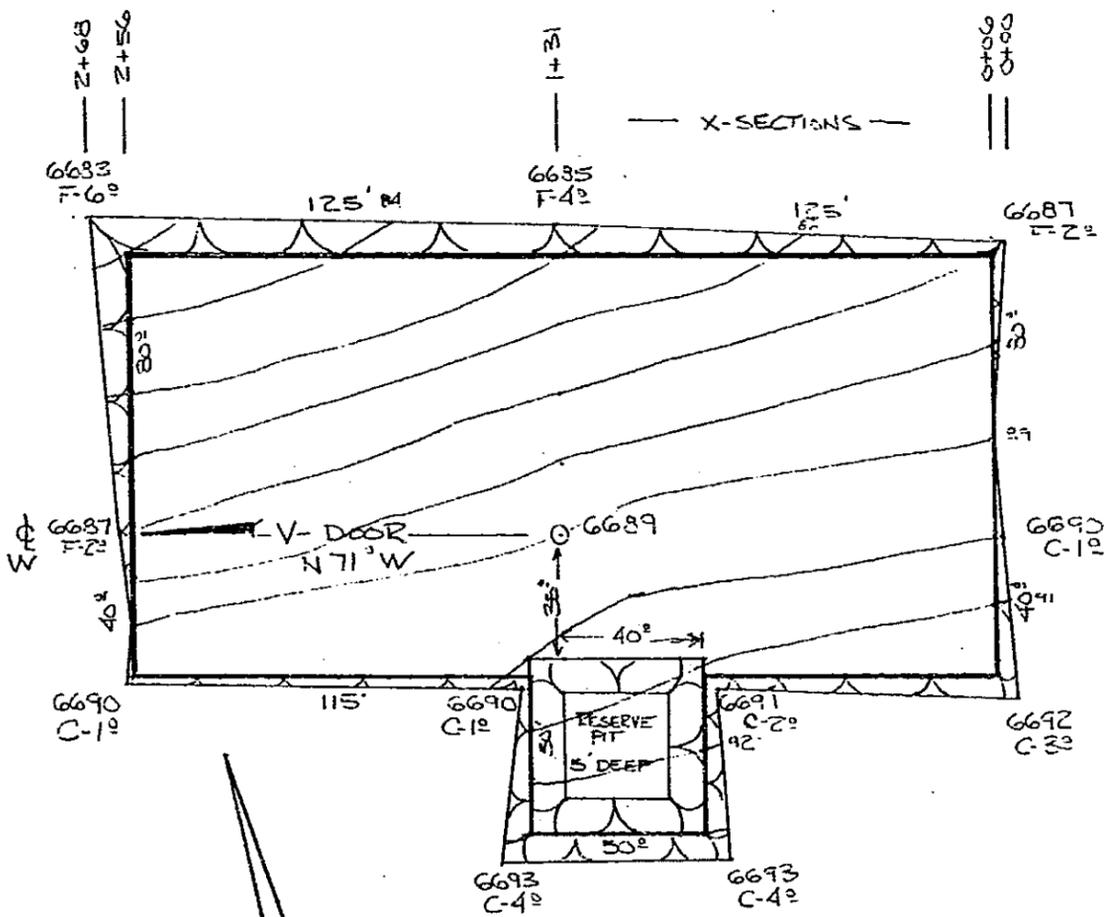
RIDGEWAY ARIZONA OIL CORPORATION  
RIDGEWAY STATE 35-1  
1660 F/SL & 1660 F/WL  
SEC. 35 T12N R29E G. & S.R.M.  
APACHE COUNTY, AZ.

RIDGEWAY ARIZONA OIL CORPORATION

SCALE: 1" = 50'

RIDGEWAY STATE 35-1  
1660 F/SL & 1660 F/WL  
SEC. 35 T12N R29E G & S.R.M.  
APACHE COUNTY, AZ.

CONTOUR INT. = 1'



PAD LAYOUT AND TOPOGRAPHY

RIDGEWAY ARIZONA OIL CORPORATION

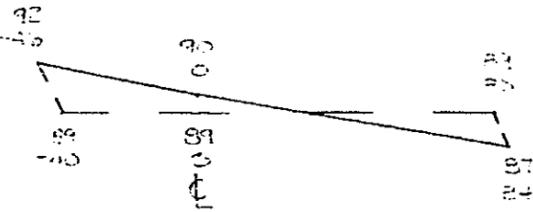
SCALE: HORZ. 1" = 50'  
 VERT. 1" = 10'

RIDGEWAY STATE 35-1  
 1660 F/SL & 1660 F/WL  
 Sec. 35 T12N R29E G&S.R.M.  
 APACHE COUNTY, AZ

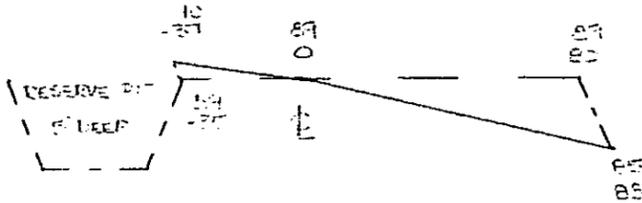
0+00

ZERO CUT/FILL

0+06

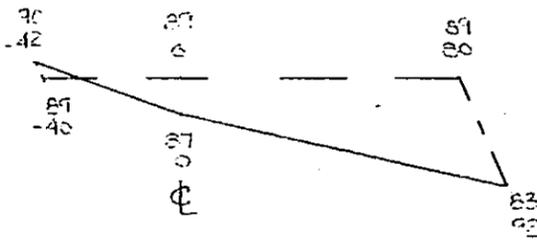


1+31



X-SECTIONS AND VOLUMES

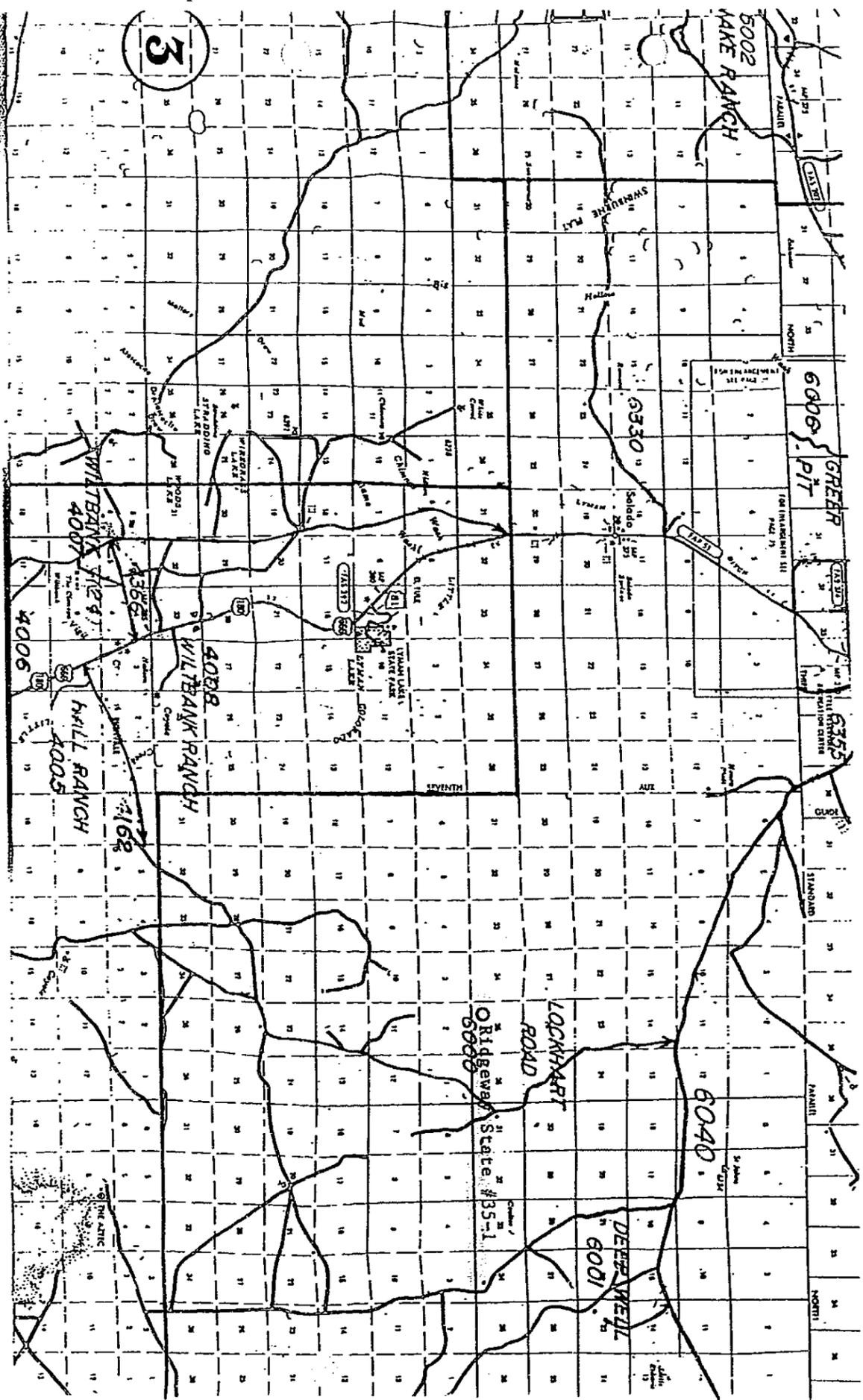
2+56



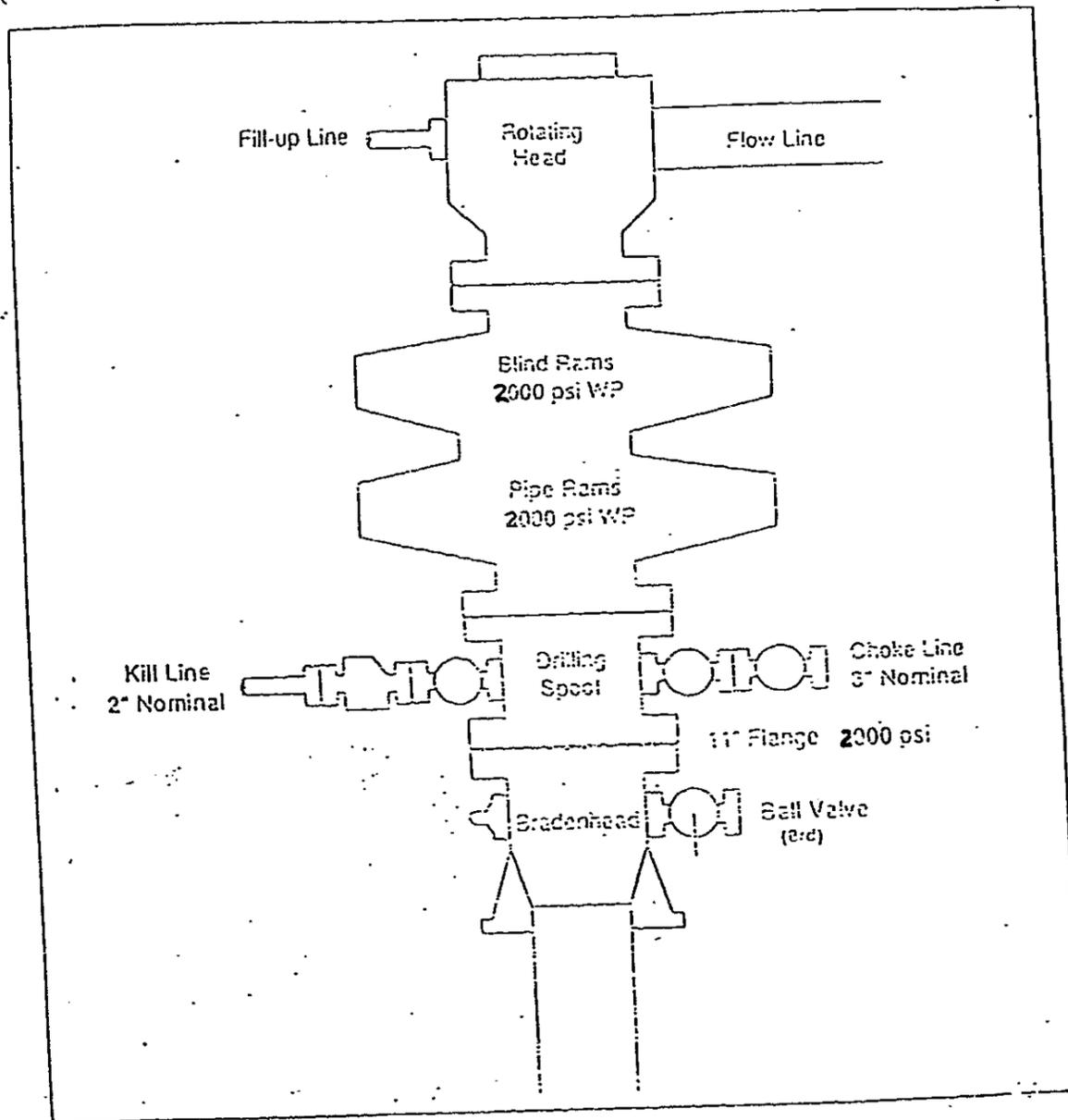
2+68

ZERO CUT/FILL

CUT..... 334 CU. YDS.  
 FILL..... 1798 CU. YDS.  
 PIT EXCAVATION..... 300 CU. YDS.



BOP STACK ARRANGEMENT



All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 600 psi. The blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

**RECEIPT** Date 10-16 1995 No. 3085  
 Received From Ridgeway Arizona Oil Corp  
 Address 1080-700 4th Avenue SW Calgary Alberta Canada  
 For Drilling Permit # 890 Dollars \$ 25.00

ACCOUNT		HOW PAID	
AMT. OF ACCOUNT		CASH	
AMT. PAID		CHECK	<u>25.00</u>
BALANCE DUE		MONEY ORDER	

Check # 1156  
 By J. Moore

8K806 Redifrm

**RIDGEWAY ARIZONA OIL CORP.** 1156  
 403-266-6362  
 1080-700 - 4TH AVENUE S.W.  
 CALGARY, ALBERTA  
 CANADA T2P 3J4

October 5th 1995 91-2/1221

PAY TO THE ORDER OF Arizona Geological Surveys \$ 25.00  
 -----Twenty-five-----00 DOLLARS

**BANK ONE.**  
 Bank One, Arizona, NA  
 St. Johns Office (043)  
 St. Johns, Arizona

FOR WELL LICENCE - STATE 38-1-122-29E  
 ⑈001156⑈ ⑆122100024⑆

[Signature]

Permit # 890

**ORGANIZATION REPORT**

Full Name of the Company, Organization, or Individual  
RIDGEWAY ARIZONA OIL CORPORATION

Mailing Address and Phone Number  
1080,700 - 4th Ave. SW Calgary, Alberta, Canada T2P-3J4

Plan of Organization (State whether organization is a corporation, joint stock association, firm or partnership, or individual)  
Corporation

Purpose of Organization (State type of business in which engaged)  
Oil & Gas Exploration and Production

If a reorganization, give name and address of previous organization  
Newco

If a foreign corporation, give (1) State where incorporated <u>Arizona State Corp.</u>	(2) Name and mailing address of state agent <u>Don Riggs PO Box 1110 St. Johns, AZ 85936</u>	(3) Date of permit to do business in state <u>May 16, 1994</u>
---	---	---

Principal Officers or Partners (if partnership) NAME	TITLE	MAILING ADDRESS
<u>Walter B. Ruck</u>	<u>President</u>	<u>2604 Signal Ridge View SW Calgary Alberta T3H 3G1</u>
<u>Don R. Riggs</u>	<u>Vice President</u>	<u>PO Box 1110 St. Johns, AZ 85936</u>
<u>E. Maxine Robertson</u>	<u>Secretary</u>	<u>872 Queensland Dr. SE Calgary, Alberta T2J 6E6</u>

DIRECTORS NAME	MAILING ADDRESS
<u>Walter B. Ruck</u>	<u>As above</u>
<u>Don R. Riggs</u>	<u>As above</u>
<u>E. Maxine Robertson</u>	<u>As above</u>

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the vice-president of the Ridgeway Arizona Oil Corp. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Signature [Handwritten Signature]

Date 2-19-97



Mail completed form to:  
 Oil and Gas Program Administrator  
 Arizona Geological Survey  
 416 W. Congress, #100  
 Tucson, AZ 85701

STATE OF ARIZONA  
**OIL & GAS CONSERVATION COMMISSION**  
 Organization Report  
 File One Copy  
 Form No. 1

Operator Ridgeway Arizona Oil Corporation

Bond Company: Bank One Arizona Amount: \$25,000\*

Bond No.: CD#4002111 (\$10,000) 07/07/94  
CD#4002112 (\$15,000) Date approved: 11/28/94

\* Two separate CD's to make up one blanket bond. These 2 CD's are not to be released until all wells covered by the blanket bond have been plugged and abandoned.

Permits covered by this bond:

883  
884  
885  
888  
890  
891  
892  
893  
895  
896  
897  
898  
899  
900  
901  
902  
903  
904



Fife Symington  
Governor

State of Arizona  
**Arizona Geological Survey**

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



Larry D. Fellows  
Director and State Geologist

July 28, 1997

Mr. Don Riggs  
Vice President  
Ridgeway Arizona Oil Corp  
P.O. Box 1110  
St. Johns, Arizona 85936

*890*

Dear Mr. Riggs:

In response to your phone call about expired permits 890, 891, 892, and 893, please be advised that extensions may be considered after we receive your request certifying in writing that the wells will be drilled in accordance with the drilling prognosis and all conditions and notification requirements of the original permits.

Our records show that Ridgeway Arizona Oil Corporation remains out of compliance with Commission rules in several areas. Ridgeway is not in compliance with its obligation to: (1) plug the 22-1 State (885) and Plateau Cattle 1A (883) wells; (2) post identifying signs at each well; (3) file samples on the 22-1X (888) and 11-21 (895) wells; (4) file logs, tests, core chips, and analyses; (5) report the stimulation of any well within 15 days of the stimulation; and (6) submit sundry reports detailing operations from spud date to current status for each of the 11 wells drilled by Ridgeway in 1997.

Sincerely,

*Steven L. Rauzi*

Steven L. Rauzi  
Oil & Gas Program Administrator

c Oil and Gas Commissioners; Larry D. Fellows  
Office of Attorney General



Fife Symington  
Governor

State of Arizona  
**Arizona Geological Survey**

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



Larry D. Fellows  
Director and State Geologist

June 2, 1997

Mr. Don Riggs  
Vice President  
Ridgeway Arizona Oil Corp  
P.O. Box 1110  
St. Johns, Arizona 85936

Re: Expiration of Drilling Permits:

Ridgeway 35-1 State, Permit 890 ✓  
Ridgeway 10-1 State, Permit 891  
Ridgeway 11-1 State, Permit 892  
Ridgeway 02-1 State, Permit 893

Dear Mr. Riggs:

Our records show that the referenced permits expired in April 1997. These permits are now null and void unless an extension in writing is granted by the Oil and Gas Conservation Commission.

Sincerely,

Steven L. Rauzi  
Oil & Gas Program Administrator

## Ridgeway expands drilling to 12 wells



Photo by Art Harrington

Ridgeway Petroleum president Walter B. Ruck, (rt.) has announced the company will drill 12, instead of 10, delineation wells. Don Riggs, manager of Ridgeway Arizona, is also pictured.

ST. JOHNS — Walter B. Ruck, president of Ridgeway Petroleum, announced Thursday in St. Johns that the Calgary-based company's 10-well delineation drilling program has been expanded to 12 wells. The company's president and chairman of the board was in Arizona to meet with staff and to personally check on the progress being made in defining the company's highly-successful CO<sub>2</sub> discovery in southern Apache County.

"Every CO<sub>2</sub> field has been discovered by accident," he said. "We initially came here searching for oil." The tip-off for Ridgeway had been the published results of the geothermal drilling done several years ago at Alpine, which had been funded by the United States Department of Energy. While Ruck still believes oil may be found in the area, the company's initial drilling discovered a vast reservoir of carbon dioxide gas instead. Ruck explained that it seems to be found where there has been contact between volcanic deposits and wet

limestone. "The fields are typically very large when you find them," he said. "But you may drill hundreds of wells searching for the gas and never find it." So far the gas has been found in every well Ridgeway has drilled here.

California petroleum and food industries all need CO<sub>2</sub> badly, Ruck explained, since no natural reservoirs of it have ever been discovered there. The demand is such that there appears to be substantial interest in constructing a pipeline which would likely carry the liquefied and pressurized gas from southern Apache County to Bakersfield, Cal. Ruck estimates it would cost between \$200-250 million to build such a pipeline.

The Arizona Oil and Gas Commission has decided to hold its annual meeting on June 13 in St. Johns at Ridgeway's offices. According to Ruck, the meeting is kind of snowballing. At least four pipeline companies have notified him they plan to come,

along with representatives of a number of major oil companies. Ruck expects some important decisions about the future of Ridgeway's project may be made at that time.

Ruck cautioned, "We're not a panacea for the area." He noted that the local unemployment rate will not be reduced much by the CO<sub>2</sub> development, since most of the work is so specialized it requires bringing in highly-trained and experienced personnel. On the other hand, he admitted, he believes the development will ultimately be good for the area. It is already infusing money into the local economy. The company now has a large drilling rig and a service rig, or completion unit, in addition to all of the other well services which have come in to assist in the exploration. "It is also an environmentally clean industry, when compared to other oil and gas exploration," he said.

What about the helium content? According to Ruck, it has been significant, testing between .65 and .70 percent. By comparison, he said, most of the helium being commercially extracted tests at less than .30 percent. Consequently, the construction of a helium extraction plant is still a possibility, he said, "But it would be expensive — probably \$35-40 million." Interestingly enough, the United States produces 95 percent of the world's helium.

The president said the company will be going to faster air drilling for the remainder of the planned wells. He said the down side is that it is impossible to core or to get the quality of samples which can be obtained by mud drilling. "We did enough coring and drill-stem testing on the first wells, though, that we can stand the air drilling on the remaining wells," he said.

The wells drilled thus far have ranged from 1,800 to 3,150 feet. "As we go further north," Ruck said, "the wells may go down to 4,500." The required depth can vary as much as 450 feet, due to surface elevation differences. All of the wells are now being taken down to the granite.

# Stock soars on drilling discoveries

Art Harrington  
The Observer

file 890

## APACHE COUNTY —

Southern Apache County is making international news with the discovery of its vast CO<sub>2</sub> resources. Consequently the stock of developer Ridgeway Petroleum Corporation continues to climb.

Drilling by Aztec Well Service, contracted by Ridgeway, began on February 12 to prove up the carbon dioxide gas reserves which had been estimated at four-to-five trillion cubic feet. The huge rigs have lost no time in completing seven wells and are now working on the eighth.

According to information *The Observer* has been able to discover, the company has hit CO<sub>2</sub> in each of the wells drilled. This would seemingly indicate widespread deposits, since drilling thus far has been reported in areas from north of St. Johns to just northeast of Springerville.

The discovery has not escaped the attention of the stock market. Ridgeway Petroleum stock (symbol RGW) has moved this year from a low of \$.92 per share to a high of \$7.35 (Canadian). On Friday it closed at \$5.55, having traded as high as \$5.75 that day.

On Monday trading of the stock on the Vancouver exchange was temporarily halted. It was resumed after the company announced a blowout on the #6 well had been contained. With that being an indicator of an even greater reservoir, the stock closed on Monday at \$6.00.

Ridgeway was incorporated February 22, 1980 as Brent West Minerals. It continued doing business under that name until February 26, 1990, when it became Ridgeway Petroleum Corp. Its

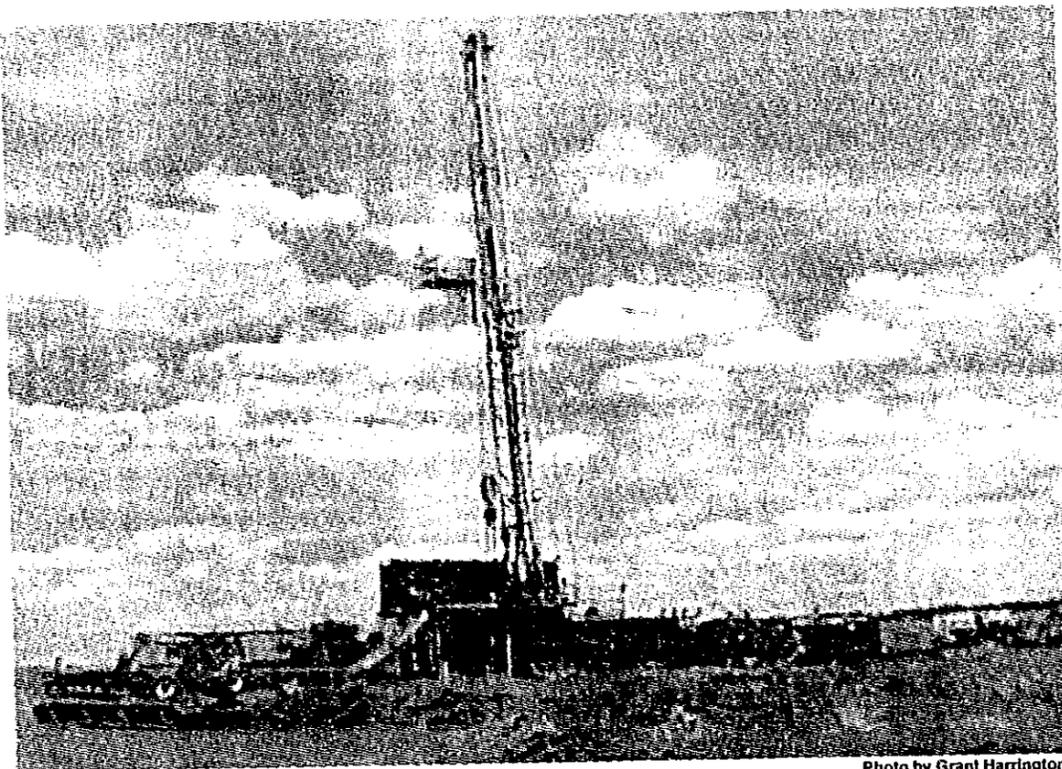


Photo by Grant Harrington

Drilling in southern Apache County has revealed immense deposits of CO<sub>2</sub>. Ridgeway Petroleum, the developer, has realized spectacular increases in its stock since the news of the discoveries has reached investors. The rig pictured above costs over \$1 million dollars. It has a crew of eight which man it with 12-hour shifts, so the rig can keep drilling 24-hours a day.

home office is in Calgary, Alberta, Canada. The primary business of the company is the extraction of oil and gas, with a secondary interest in diamonds. As of May 2, 11,061,829 of its authorized 25,000,000 shares had been issued. The volume traded on that day was 12,700.

Ridgeway President Walter Ruck also announced on May 2 that a 4,800,000 special warrant brokered private placement through Yorkton Securities had closed. Gross proceeds of \$16,800,000 were received, of which approximately \$10 million was being held in escrow, pending the advancement of the company's previously announced transaction involving Arizona Resources In-

dustries.

Is there a market for such CO<sub>2</sub> resources? Without a doubt. The largest consumer of CO<sub>2</sub> is the petroleum industry, which uses the gas to help force otherwise unretrievable oil deposits into collectable pools. The Permian Basin in west Texas and eastern New Mexico, for example, uses in excess of 1.4 billion cubic feet per day in its oil recovery operations. The hundreds of other uses for CO<sub>2</sub> include a diversity ranging from food processing, carbonation of beverages and water purification, to flash freezing.

How would the product be moved? According to information *The Observer* has been able to glean, resources of two trillion cubic feet would justify the construc-

tion of a pipeline to oilfields in California or Texas. The company has apparently proven with its wells drilled thus far that more than adequate reserves exist to begin planning for a pipeline.

Our information also indicates that a number of major players in the industry are actively involved in bidding on the gas. Names such as Chevron and Cal Resources continue to surface.

Also previously reported has been the discovery of helium, along with the CO<sub>2</sub>. While the quantity of helium has yet to be determined, *The Observer* understands Ridgeway is also evaluating the possibility of building a helium extraction plant in southern Apache County.



Fife Symington  
Governor

State of Arizona  
**Arizona Geological Survey**

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



Larry D. Fellows  
Director and State Geologist

October 18, 1996

Mr. Walter B. Ruck, President  
Ridgeway Arizona Oil Corporation  
1080, 700-4th Avenue S.W.  
Calgary, Alberta T2P 3J4

Re: Reinstatement State Drilling Permits  
Ridgeway 35-1 State, Permit 890  
Ridgeway 10-1 State, Permit 891  
Ridgeway 11-1 State, Permit 892  
Ridgeway 02-1 State, Permit 893

Dear Mr. Ruck:

Receipt No. 3091 for the \$100 reinstatement fee for the referenced permits is enclosed. Remember to notify this office at least 48 hours before commencing drilling operations at any of the referenced wells.

Sincerely,

Steven L. Rauzi  
Oil & Gas Program Administrator

Enclosure

*through April 1997*

**RIDGEWAY ARIZONA OIL CORP.**

1080, 700 - 4th Avenue S.W., Calgary, Alberta T2P 3J4  
Phone (403) 266-6362 Fax (403) 262-5294

October 9, 1996

Arizona Geological Survey  
416 W. Congress, Suite 100  
TUCSON, Arizona 85701

**ATTN: Mr. Steven L. Rauzi,**  
**Oil & Gas Administrator**

Dear Sir:

**RE: State Drilling Permits - Ridgeway 35-1 State, Permit 890 ✓**  
**Ridgeway 10-1 State, Permit 891**  
**Ridgeway 11-1 State, Permit 892**  
**Ridgeway 02-1 State, Permit 893**

Please find enclosed 4 cheques in the amount of \$25.00 each for a new application fee for each of the above named permits to be reinstated. We also certify that the wells will be drilled in accordance with the drilling prognoses submitted with the original applications.

We will be complying with the State Rules re 22-1 State and Plateau Cattle 1A (Permit 883) in the very near future.

Yours sincerely,

**RIDGEWAY ARIZONA OIL CORP.**



Walter B. Ruck,  
Chairman

encl.

/m

**RECEIPT**

Date 10-18 1976 No. 3091

Received From Ridgeway Arizona Oil Corp.

Address 1080-700 4th Ave S.W. Calgary Alberta

One hundred and 00/100 Dollars \$100.00

For Reinstate Permit #s 890, 891, 892, & 893  
check #s 1215, 1216, 1217, & 1218

ACCOUNT		HOW PAID	
AMT. OF ACCOUNT		CASH	
AMT. PAID		CHECK	<u>100 00</u>
BALANCE DUE		MONEY ORDER	

By Steven L. Rainey

BK806 Radifrm



Fife Symington  
Governor

State of Arizona  
**Arizona Geological Survey**

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



Larry D. Fellows  
Director and State Geologist

September 26, 1996

Mr. Walter B. Ruck, President  
Ridgeway Arizona Oil Corporation  
1080, 700-4th Avenue S.W.  
Calgary, Alberta T2P 3J4

Re: Expiration of State Drilling Permits  
Ridgeway 35-1 State, Permit 890  
Ridgeway 10-1 State, Permit 891  
Ridgeway 11-1 State, Permit 892  
Ridgeway 02-1 State, Permit 893

Dear Mr. Ruck:

The referenced drilling permits, issued October 17, 1995, will expire on October 17, 1996. State drilling permits are valid for 180 days from the date of issue and may be extended for an additional 180 days. Since these permits have now been extended for one year from the date of issue, it will be necessary for you to reinstate the permits if you plan to commence drilling after October 17, 1996.

You may reinstate the drilling permits by (1) submitting a new \$25.00 application fee for each permit to be reinstated, and (2) certify in writing that the wells will be drilled in accordance with the drilling prognoses submitted with the original applications. All conditions and notification requirements of the Permits remain in force.

Our records show that two of your wells are not in compliance with State Rules. What are your plans for plugging the 22-1 State (Permit 885) and cementing the annulus of the Plateau Cattle 1A (Permit 883). I understand this could be accomplished by dispatching a cement truck from St. Johns.

Sincerely,

Steven L. Rauzi  
Oil & Gas Program Administrator



Fife Symington  
Governor

State of Arizona  
**Arizona Geological Survey**

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



Larry D. Fellows  
Director and State Geologist

February 15, 1996

Mr. Alan P. Emmendorfer, Agent  
Ridgeway Arizona Oil Corporation  
5107 Budding Lane  
Farmington, New Mexico 87402

*file 890*

Dear Mr. Emmendorfer:

This letter will serve as approval of your written request for a six-month extension to State Permits 888, 890, 891, 892, and 893. The new expiration dates will be August 25, 1996, for Permit 888 and October 17, 1996, for Permits 890, 891, 892, and 893.

Outstanding concerns on Ridgeway Arizona Oil Corporation's operations near St. Johns include

1. Plugging State 22-1 (Permit 885) from 218 feet to surface with cement;
2. Cementing open annulus on Plateau Cattle 1A (Permit 883);
3. Filing of washed and dried samples for State 3-1 (Permit 884);
3. Filing of Mud, SDL/DSN, and LSA logs on State 3-1 (Permit 884); and
4. Filing of Test Report and Gas Analysis on State 3-1 (Permit 884).

Washed and dried samples, and copies of all test reports, gas analyses, and all logs run are required pursuant to A.A.C. R12-7-121, a copy of which is enclosed for your information and file.

Please advise if I may be of further assistance.

Sincerely,

Steven L. Rauzi  
Oil & Gas Program Administrator

Enclosure

c Walter B. Ruck

Alan P. Emmendorfer  
5107 Budding Ln  
Farmington, NM 87402  
(505) 327-1376

Feb. 13, 1996

Mr. Steven L. Rauzi  
Oil and Gas Program Administrator  
Arizona Geological Survey  
416 W. Congress, Suite 100  
Tucson, AZ 85701

*file 890*

Dear Mr. Rauzi:

Ridgeway Arizona Oil Corporation requests an extension of the permit to drill for the following wells located in Apache County, Arizona.

Well Name	Permit Number
Ridgeway State #10-1	891
Ridgeway State #11-1	892
Ridgeway State #35-1	890
Ridgeway State #2-1	893
Ridgeway State #22-1X	888

Thank you for your prompt attention to this matter. Should you have any questions concerning the extension please do not hesitate to contact me.

Sincerely,

*Alan P. Emmendorfer*

Alan P. Emmendorfer  
Agent  
Ridgeway Arizona Oil Corporation





- ❖ Major markets for CO<sub>2</sub> are the Permian Basin in Texas and the light oil fields of California, where gas is injected into producing oil fields to recover additional oil reserves
- ❖ Helium will be recovered from the gas production and sold into an expanding international market
- ❖ A steady and growing market for CO<sub>2</sub> is the flash-frozen foods and carbonated beverage industry
- ❖ A market for CO<sub>2</sub> is being created with industrial Agri-Parks offering tenants lower priced CO<sub>2</sub> saving the cost to liquefy and transport the gas

#### CORPORATE INFORMATION

Head Office:  
1080, 700-4th Avenue S.W.  
Calgary, Alberta T2P 3J4

Tel: (403) 266-6362  
Fax: (403) 262-5294  
US Toll Free: (800) 347-0294

Stock Symbol: RGW

Stock Exchange: Vancouver

Recent Price: C\$1.90 - C\$1.10

Investor Relations Contact:  
Don Currie  
(604) 983-2515

## RIDGEWAY PETROLEUM CORP.

AND ITS MAJORITY-OWNED SUBSIDIARY ARIZONA RESOURCES INDUSTRIES, INC.  
New reserve estimate opens large markets for CO<sub>2</sub>

#### COMPANY OVERVIEW

Ridgeway Petroleum Corp. is a Calgary-based company with holdings in Arizona, Texas, California, Alberta, British Columbia, Saskatchewan and Ontario. Ridgeway Petroleum is the majority owner of Arizona Resources Industries, Inc.

Ridgeway, through Arizona Resources Industries, Inc. has under current ownership more than 291 square miles (186,000 acres) of land in Eastern Arizona containing significant commercial inert gas reserves. The Company's holdings are believed to contain one of the largest, high quality CO<sub>2</sub> and helium gas reserves in North America with possibilities in excess of 6.0 trillion cubic feet and a multi-billion dollar market potential.

Arizona Resources Industries, Inc.'s gas discovery and strategic location will allow the company to pursue three distinct and lucrative business opportunities.

The Company has received preliminary commitments from major companies to purchase and participate in each of the following business sectors.

#### PETROLEUM INDUSTRY

The largest bulk user of CO<sub>2</sub> gas is the petroleum industry, where CO<sub>2</sub> is used for "Enhanced Oil Recovery" (EOR). CO<sub>2</sub> gas is injected into producing oil zones to vastly reduce oil viscosity and increase movement of "in-place-oil," resulting in substantial increases in the percentage of recoverable oil from these producing zones.

Petroleum industry demand for CO<sub>2</sub> gas for this purpose continues to increase, while available reserves are declining. Petroleum companies are aggressively seeking additional sources for CO<sub>2</sub> supply. Ridgeway has already received a letter of interest from one major oil company that could yield in the range of \$100,000 per day in gross revenue in bulk CO<sub>2</sub> gas alone.

#### LIQUEFIED GAS INDUSTRY

The quality and quantity of Ridgeway's CO<sub>2</sub> and helium gas reserves offer significant commercial and industrial business opportunities. The Company's food quality CO<sub>2</sub> can be used readily in the food growing and beverage industry. Also CO<sub>2</sub> gas is used extensively in the food processing industry.

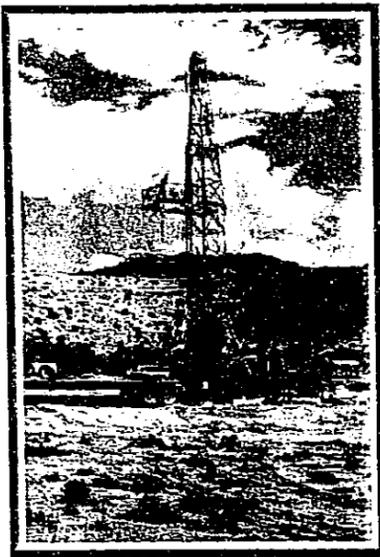
#### NEWS RELEASE

##### RIDGEWAY PETROLEUM CORP. - "ARIZONA PROJECT"

Ridgeway Petroleum Corp. (RGW) has been informed that Arizona Resources Industries, Inc. (ARI), its majority owned American subsidiary, has signed, together with Everen Securities Inc. (ESI), a retention agreement whereby Everen has agreed to act as the Company's exclusive adviser and agent in respect to the financing of the exploration and development of the "Arizona Project."

The project involves the exploitation of a CO<sub>2</sub>/helium discovery made by Ridgeway Petroleum Corp. in 1994, located in Apache County, Arizona adjoining the New Mexico state line.

Everen Securities Inc. is based in Chicago, Illinois and is a member of the New York Stock Exchange and other principal exchanges.



Bluc rig of L & B Speed Drill, Farmington, N.M., drilled the 1 Alpine Federal, a helium/carbon dioxide discovery near Arizona's Chalk Buttes.

The location of the Company's operation will allow it to effectively compete for considerable market share in the dynamic markets of Southern California and Las Vegas, Nevada, as well as Arizona, New Mexico, Colorado and Texas.

#### HELIUM

Helium content in the Arizona gas reserves is more than twice that of the average well content. The helium gas reserves, coupled with expanding helium gas utilization and resulting increases in demand, offer sizable national and international sales and profit potential.

Helium is a specialized inert gas which is exceedingly light. Historically, it is noted for its lifting capabilities with the very appreciable benefit of being non-flammable. Those same qualities are applied today for other specialized and high-tech uses as cryogenics, welding, pressurizing and purging, controlled atmospheres and leak detection.

#### AGRI-PARK DEVELOPMENT

"Controlled Environment Agriculture" (CEA) utilizes CO<sub>2</sub> gas in commercial greenhouse environments. Ridgeway Industries Inc. was created to develop the parks, attract the tenants and market the CO<sub>2</sub>. The Company's strategic location, between two (2) major power generating stations, offers tremendous cost advantages in access to cost efficient steam, water, power and property.

The company has conducted extensive engineering studies and plans to develop the Agri-Park in 25 and 50 acre parcels, with participation from major industry growers in the hydroponic and floriculture industry. The Company plans to lease sites and sell CO<sub>2</sub> gas, water and steam to tenants as well as participate on a production override basis.

#### LABORATORY RESULTS INDICATE HIGH QUALITY CO<sub>2</sub>

Gas analysis from the U.S. Bureau of Mines and Laboratory in Amarillo, Texas indicates the following properties:

10%	Nitrogen
89%	CO <sub>2</sub>
.7%	Helium
.1%	Methane
.1%	Argon
99.9%	

Lack of any identification of the presence of H<sub>2</sub>S tends to confirm the food quality of the CO<sub>2</sub>.



#### COMPANY HISTORY

Ridgeway Petroleum Corp. was founded in 1980 and currently has holdings in Arizona, Texas, British Columbia, Alberta, Saskatchewan and Ontario. Walter B. Ruck, a 35-year oil patch veteran, has been President and Chief Executive Officer since 1986.

In 1995, Ridgeway became majority owner of Arizona Resources Industries, Inc. by selling to ARI its two wholly-owned subsidiaries, Ridgeway Arizona Oil Corp and Ridgeway Industries, Inc., for guaranteed notes and shares.

Mr. Ruck is Director and Chairman of the Board of ARI and Director of Ridgeway Arizona Oil Corp. and Ridgeway Industries, Inc.

Other ARI directors are Michael Skellern, President and Chief Operating Officer; Robert Gove, Chief Financial Officer; James C. Pietsch; H.J. Platt; and Danny Ainge.

### NEWS RELEASE

#### LAND POSITION INCREASED TO COVER POTENTIAL

#### 6.4 TRILLION CUBIC FEET OF CO<sub>2</sub>/HELIUM GAS RESERVE

Calgary, Alberta - Arizona Resources Industries, Inc. has massively expanded its lease holdings in Apache County, Arizona. The 144,000 acre expansion, announced by Ridgeway Petroleum Corp., majority owner of ARI, brings total holdings in the area to 186,000 acres.

New geological information, interpretation and consultation with the Arizona Geological Survey has strengthened the Company's confidence that the field contains one of the largest high-quality CO<sub>2</sub> and helium reserves in North America. The current objective is to further increase the holdings to more than 250,000 acres.

01/24/96 11:27

403 5294

RIDGEWAY PETRO

001/001



# RIDGEWAY PETROLEUM CORP.

1080, 700 - 4th AVENUE S.W., CALGARY, ALBERTA T2P 3J4  
TELEPHONE: (403) 266-6362 FAX: (403) 262-5294

STEVE

~~Ridgeway~~

F.Y.I.

WR

## NEWS RELEASE

Symbol: RGW  
Listed: VSE  
January 23, 1996

### "ARIZONA PROJECT"

\*\*\*\*\*  
"Land position increased to cover potential 6.4 trillion cubic feet of CO<sub>2</sub>/Helium gas reserve"

Ridgeway Petroleum Corp. (RGW) has been advised by Arizona Resources Industries, Inc. (ARI) (the owner and operator of the project) that as a result of new geological information, interpretation and consultation with the Arizona Geological Survey, leases have been obtained on an additional 144,000 acres bringing the total under lease to 186,000 acres.

The current leasing program is to acquire up to a total of 250,000 acres and should be completed within 15 days.

RGW controls in excess of 50% of ARI by share ownership and Guaranteed Convertible Notes.

ON BEHALF OF THE BOARD

Walter B. Ruck, Chairman

THE VANCOUVER STOCK EXCHANGE HAS NEITHER APPROVED NOR DISAPPROVED THE INFORMATION CONTAINED HEREIN.



FIFE SYMINGTON  
GOVERNOR

Arizona  
State Land Department

1616 WEST ADAMS  
PHOENIX, ARIZONA 85007



M.J. HASSELL  
STATE LAND COMMISSIONER

January 2, 1996

Ms. Carol Griffith  
State Historic Preservation Office  
1300 West Washington  
Phoenix, Arizona 85007

*file 890*

RE: Ridgeway Petroleum (ASLD 13-53801, 13-53955)

Dear Ms. Griffith:

In February 1994, the Arizona State Land Department (ASLD) issued an oil and gas lease (13-53801) on 2845 acres of State Trust land in Sections 2, 3, 4, 10, 11, and 12 in T11N R29E, and two months later, ASLD issued another oil and gas lease (13-53955) for Section 35, T12N R29E). Both leases are held by Ridgeway Arizona Oil Corporation of Alberta Canada (Ridgeway).

Before drilling four exploratory gas wells within the lease area, ASLD asked Ridgeway to provide an archaeological survey of the four proposed well locations (M&B NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$  Sec. 2, NE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  Sec. 10, NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$  Sec. 11, T11N R29E, and in SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$  Sec. 35, T12N R29E) and proposed access roads through Sections 2, 10, and 11 in T11N R29E, and through Section 35 in T12N R29E. The results of the archaeological survey are described in *Cultural Resource Inventory - Ridgeway State 2-1, 10-1, 11-1, and 35-1 Well Locations and Access Roads, Ridgeway Arizona Oil Corporation, Apache County, Arizona* that was prepared by Complete Archaeological Service Associates (CASA) in October 1995.

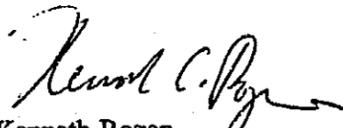
The report (copy enclosed) indicates that only two isolated artifacts were found during the survey, which covered 30.1 acres including the drill locations and proposed access roads. Therefore, no additional archaeological work was needed before Ridgeway drilled the wells as permitted by the Arizona Oil and Gas Conservation Commission (AOGCC).

Two typographic errors in the report pertaining to the project area location in Section 35 have been identified by Ms. Beth Grindell of the Arizona State Museum (ASM), and I have corrected these on the enclosed copy (see pages 2 and 4). By copy of this letter to the author, Mr. Laurens C. Hammack, I would like to take this opportunity to ask that future reports of surveys of State Trust land specifically identify ASLD as the affected land-managing agency, since many different state agencies administer "State lands".

Ms. Carol Griffith  
January 2, 1996  
Page 2

Please call me at 542-2684 if you have any questions regarding this matter.

Sincerely,

  
Kenneth Rozen  
Cultural Resources Manager

KR/ch

encl.

C: Alan Emmendorfer, Ridgeway  
Beth Grindell, ASM  
Laurens Hammack, CASA  
Barry Moody, ASLD Minerals  
Steve Rauzi, AOGCC

#2-1/PN 890

**ABSTRACT**

A cultural resource inventory was undertaken on four proposed CO<sub>2</sub> well locations and associated access roads on State of Arizona lands southeast of St. Johns, Arizona. The inventory was done by Laurens C. Hammack, Complete Archaeological Service Associates (CASA) at the request of Alan Emmendorfer, agent for the operator, Ridgeway Arizona Oil Corporation. The field work was done on October 17, 1995 under the auspices of State of Arizona Permit No. 95-111 issued to CASA.

A 300-ft by 300-ft area (2.06 acres) was inventoried for each well pad with maximum dimensions of 250-ft by 180-ft (1.03 acres). Approximately 9500 feet of access road was also inventoried with a 100-ft wide corridor (21.35 acres) surveyed for a maximum 30-ft wide construction easement (6.55 acres). A total of 30.09 acres was inventoried for this project. No sites were recorded within the survey areas and cultural resource clearance is recommended for Ridgeway State 2-1, 10-1, 11-1 and 35-1 well locations and access roads at the locations described in this report.

## INTRODUCTION

A Class III cultural resource inventory was undertaken on four proposed CO<sub>2</sub> well locations and associated access roads on State lands approximately 12 miles southeast of St. Johns, Arizona (Figure 1). The inventory was undertaken for Ridgeway Arizona Oil Corporation of Alberta, Canada at the request of Alan Emmendorfer, agent for the operator. The inventory was done by Laurens C. Hammack, Complete Archaeological Service Associates (CASA) on October 17, 1995. The field work was done under the authority of Arizona State Permit No. 95-111 issued to CASA and was undertaken to comply with various cultural resource preservation legislation.

## PROJECT LOCATION AND DESCRIPTION

The proposed well locations are situated in rolling grasslands with areas of pinyon/juniper woodlands in Sections 2, 10, and 11 in T11N, R29E and Section 32, T12N, R29E, Gila-Salt River PM, Apache County, Arizona (Figure 2). All locations and access roads area on leased State lands (State Lease No's 13-53-801 and 13-53-955) and are utilized for cattle grazing. At elevations ranging from 6650 to 6850 feet vegetation includes snakeweed, rabbitbrush, narrow-leaf yucca in addition to the pinyon, juniper, and grasses. Most of the locations contain outcrops of Richville gravels, a localized geological deposit. A complete description of each location including details on cadastral location, staked footages, setting, cultural resources, and recommendations is presented in the following section. The map references for this project are the Lyman Lake, Voight Ranch, Mesa Parada NW, and St. Johns South, Arizona 7.5 minute USGS quadrangles dated 1971/1984.

## SURVEY METHODOLOGY AND PREVIOUS RESEARCH

Prior to beginning the field investigations, a record search was undertaken at the Arizona State Museum in Tucson. This record search indicated that no sites had been found or surveys previously undertaken within any of the sections in the project area. Background data on the prehistory of the area can be found in several large scale projects undertaken within the general vicinity of St. Johns. Between 1974 and 1978, the Museum of Northern Arizona conducted surveys and excavations on the proposed Coronado Generating Station and associated rail lines and transmission lines (Bradford ND; Stebbins 1980; Gasser 1982; Swarthout and Dulaney 1982). At the same time, the Arizona State Museum was conducting excavations on the Tucson Electric Power Company's Generating Station between St. Johns and Springerville (Westfall 1981). Included in this project was excavation along the proposed coal railroad connecting the Coronado Generating Station and the TEP Generating Station. This railroad passes several miles to the east of the present project. Of the five sites recorded southeast of St. Johns, four are historic trash scatters all post dating 1950 and were of no significance. The one prehistoric site is a lithic scatter with a probable hearth. The site was not considered significant and was not excavated. This report also provides good background information on the natural environment of the project area with excellent descriptions of the geology, soils, and vegetation.

The four well locations had been completely staked by Poteet Engineering, Farmington New Mexico prior to conducting the inventory. Each drill hole had been staked with a 5 foot metal fence post with a lathe attached giving well name and staked footages. The well pad and pit corners were also staked with labeled lathe attached. The center stake was marked with a variety of flagging colors with corner stakes marked with pink flagging. A 300-ft by 300-ft (2.06 acre) area was surveyed for each well pad measuring a maximum 250 by 180 feet (1.03 acres) (Figure 3). Alan Emmendorfer, agent for the operator accompanied the archaeologist



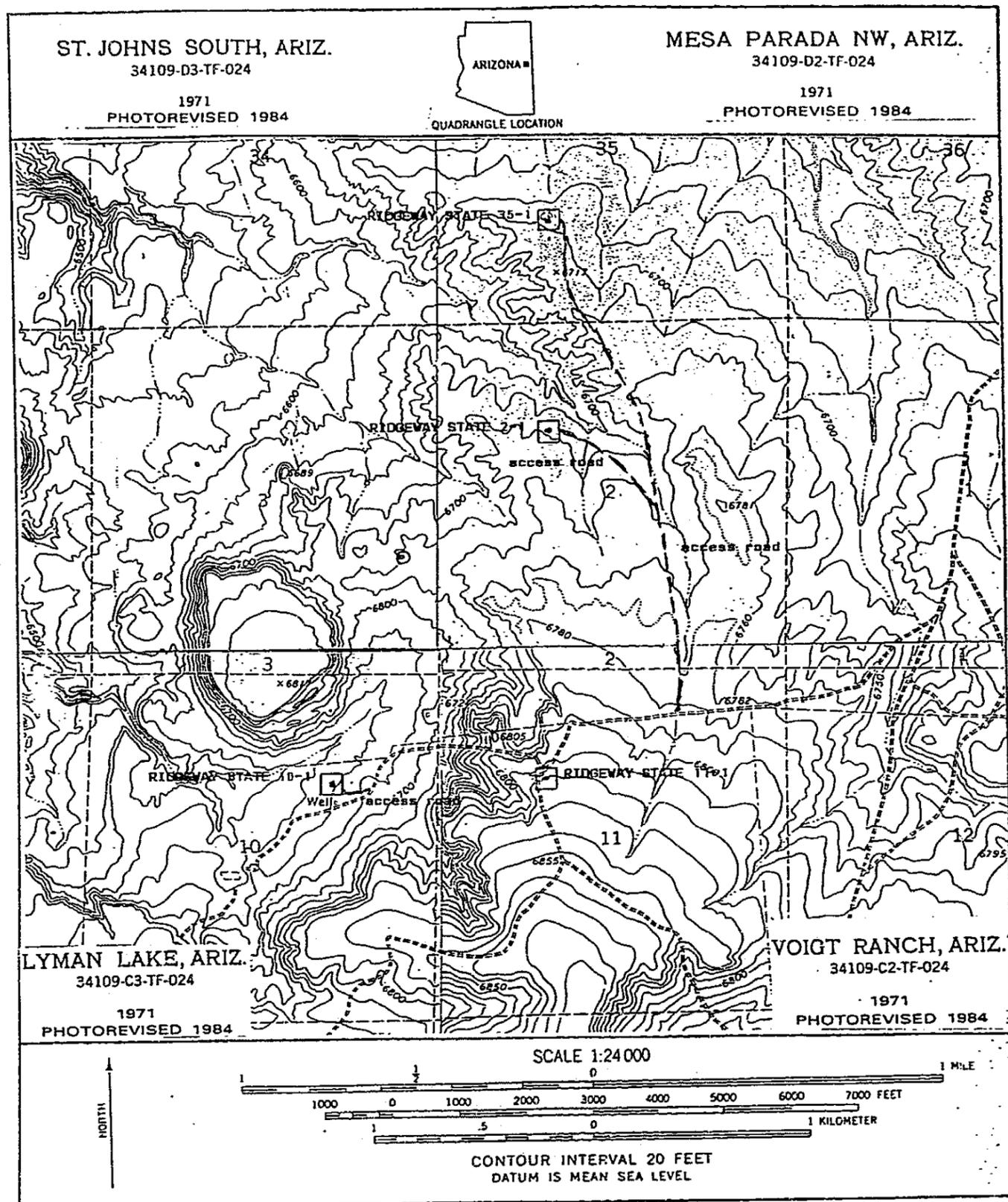


Figure 2: Location map for Ridgeway State 2-1, 10-1, 11-1, and 12-1 well pads and access roads.

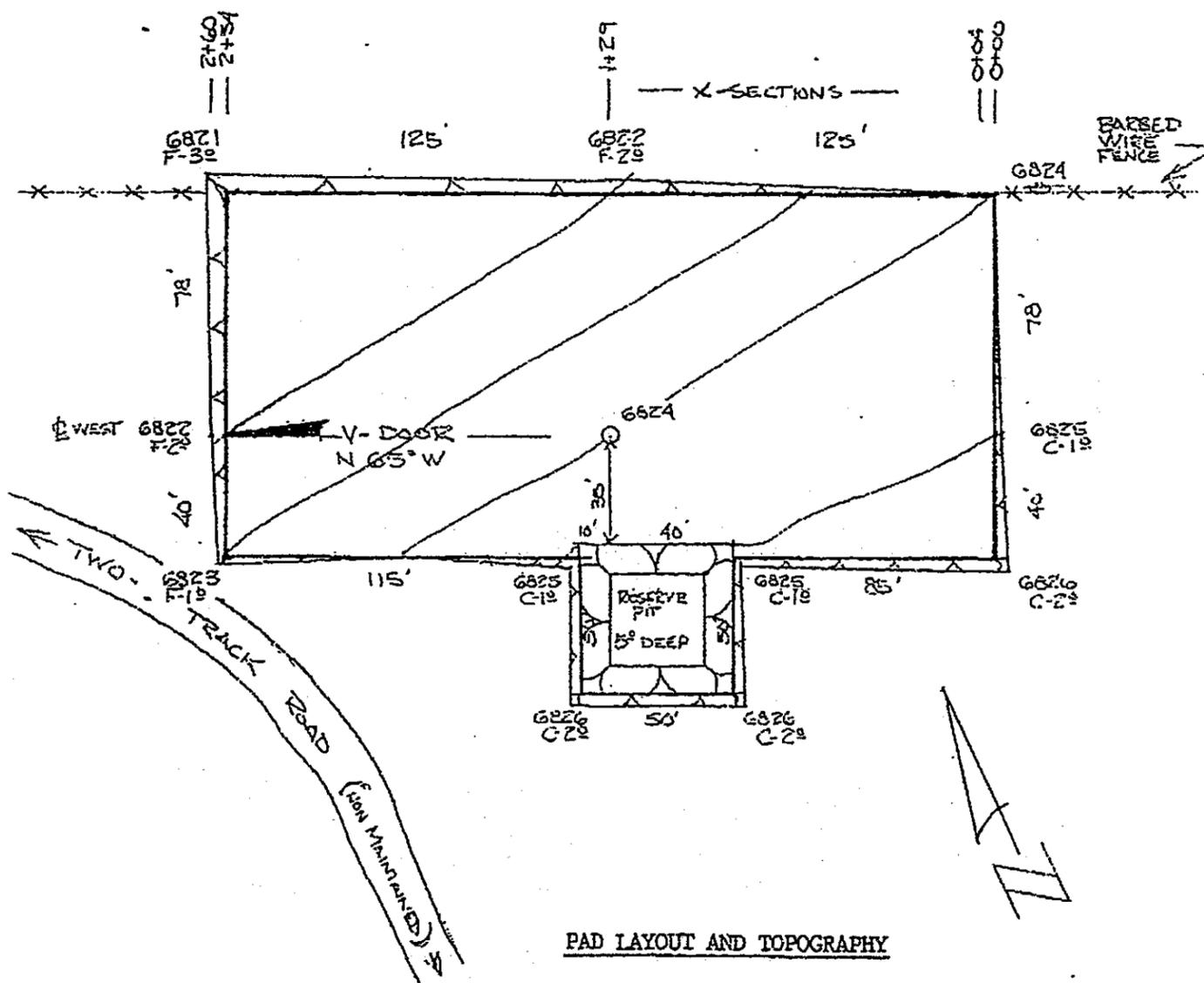
35-1

RIDGEWAY-ARIZONA OIL CORPORATION

SCALE: HORZ. 1" = 50'  
 VERT. 1" = 10'

RIDGEWAY STATE 11-1  
 1775 F/NL & 1660 F/WL  
 SEC. 11 T11N R29E G & S. R.M.  
 APACHE COUNTY, AZ.

CONTOUR INT. = 1'



PAD LAYOUT AND TOPOGRAPHY

Figure 3. Typical plat for Ridgeway Arizona Oil Corporation CO<sub>2</sub> wells.

during the inventory. The survey was done by one person walking a series of parallel transects spaced no greater than 15 meters apart. Access roads were inventoried by walking a tight zig zag transect across the flagged centerline. A 100-ft wide corridor was inventoried for a maximum 30-ft wide construction easement.

#### INVENTORY RESULTS AND RECOMMENDATIONS

The cultural resource inventory of 30.09 acres for four proposed CO<sub>2</sub> well locations and associated access roads resulted in the location of no sites. Two chalcedony flakes were noted in the surveyed bufferzone of one well. These flakes have no research potential. Cultural resource clearance is recommended for Ridgeway State 2-1; Ridgeway State 10-1; Ridgeway State 11-1, and Ridgeway State 35-1 and associated access roads at the locations described in this report.

#### REFERENCES

Bradford, James E.

- ND The Coronado Generating Station Plant Site and Access Road. The Coronado Project Archaeological Investigations. Coronado Series 1. MNA Research Paper 17, Flagstaff.

Gasser, Robert E.

- 1982 The Specialists Volume: Biocultural Analyses. The Coronado Project Archaeological Investigations. Coronado Series 4. MNA Research Paper 23, Flagstaff.

Stebbins, Sara

- 1980 The Concho Well Field Water Transmission Pipeline. The Coronado Project Archaeological Investigations. Coronado Series 2. MNA Research Paper 19, Flagstaff.

Swarthout, Jeanne and Alan Dulaney

- 1982 A Description of Ceramic Collections from the Railroad and Transmission Line Corridors. The Coronado Project Archaeological Investigations. Coronado Series 5. MNA Research Paper 26, Flagstaff.

Westfall, Deborah A.

- 1981 Prehistory of the St. Johns Area, East-Central Arizona: The TEP Project. Cultural Resource Management Division, Arizona State Museum, The University of Arizona Archaeological Series No. 153, Tucson.

WELL DESCRIPTIONS

Well Name: Ridgeway State 2-1

Location: Well pad: NW SE NW Section 2,  
Access road: [end] NW NW SE Section 2 (T129N, R11E, G&SR PM, Apache County, Arizona(Figure 2))

Operator: Ridgeway Arizona Oil Corporation

Map Reference: Mesa Paradanw NW, Ariz. 7.5 minute 1971/1984

Staked Footages: 1660' FNL, 1660' FWL

Ownership: State of Arizona

Elevation: 6710 feet

Area Surveyed: Well pad: 300-ft by 300-ft (2.06 acres) surveyed for a well pad with dimensions of 250-ft by 180 feet (1.03 acres) (Figure 3).  
Access rd.: Approximately 2000 ft in-length, 100-ft wide corridor (4.6 acres) surveyed for maximum 30-ft wide (1.38 acres).

Description: Well pad is situated on north sloping terrain above small drainage in heavy pinyon/juniper woodland (Figure 4). Several erosional channels cut through pad area. Gravels occur in a sandy gray brown loam. Besides the pinyon/juniper several narrow-leaf yucca and grasses occur. Access road out of northeast corner of pad over rolling grassland terrain (chained pinyon-juniper) with snakeweed, sand sage, and rabbitbrush occurring throughout. Road ties-in with new road from Ridgeway State 35-1.

Cultural Resources: None

Recommendations: Cultural resource clearance is recommended for Ridgeway State 2-1 and access road at the location described above.

T11N R29E

Well Name: Ridgeway State 10-1

Location: Well pad: NE SW NE Section 10.  
Access road: [END] NW SE NE Section 10, T11N, R29E, G&SR PM,  
Apache County, Arizona (Figure 2).

Operator: Ridgeway Arizona Oil Corporation

Map Reference: Lyman Lake, Ariz. 7.5 minute, 1971/1984

Staked Footages: 1660' FNL, 1660' FEL

Ownership: State of Arizona

Elevation: 6654 feet

Area Surveyed: Well pad: 300-ft by 300-ft (2.06 acres) surveyed for a well pad with  
dimensions of 250-ft by 180 feet (1.03 acres) (Figure 3).  
Access rd.: Approximately 500-ft in-length, 100-ft wide corridor (1.15  
acres) surveyed for maximum 30-ft wide (0.345 acres)  
easement

Description: Well pad is staked on level to gently west/northwest sloping on cinder  
covered soil with heavy concentrations of dark-colored gravels.  
Location directly above (east/southeast) of small drainage. Prominent  
mesa across wash to west (Figure 5). Vegetation of grasses, snakeweed,  
and scattered small juniper. Access road off existing ranch road to  
existing water tank to south.

Cultural Resources: None

Recommendations: Cultural resource clearance is recommended for Ridgeway State 10-1 and  
access road at the location described above.



Figure 4. Staked location for Ridgeway State 2-1 looking northwest. Arrow indicates drill hole.

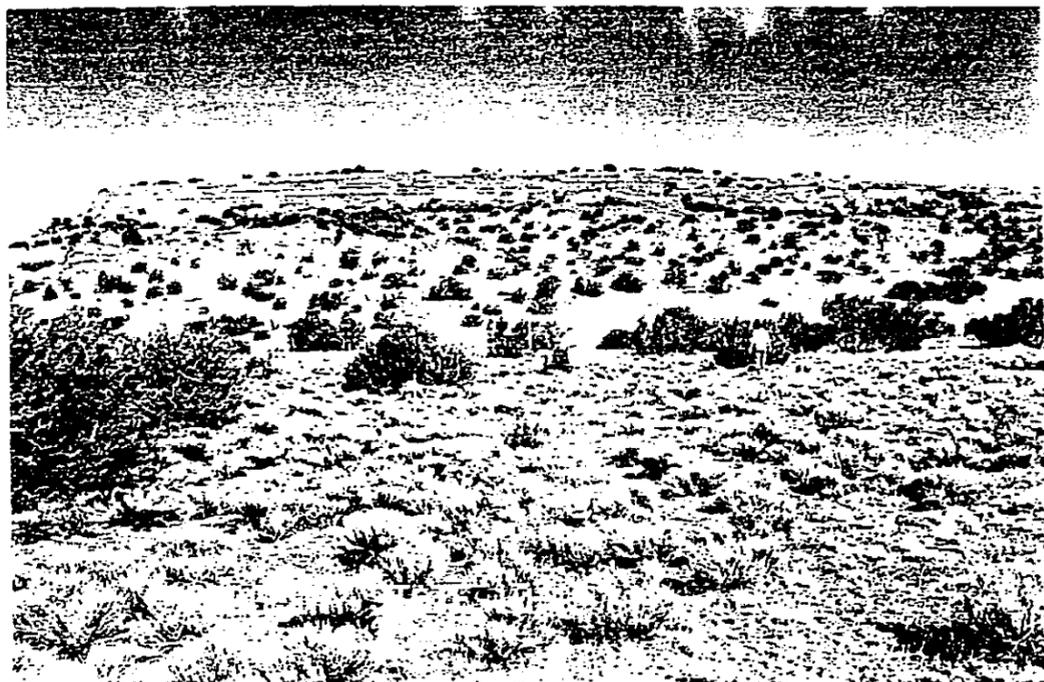


Figure 5. Overall view of staked location for Ridgeway State 10-1 looking west.

Well Name: Ridgeway State 11-1

Location: Well pad: NW SE NW Section 10, T11N, R29E, G&SR PM, Apache County, Arizona (Figure 2).

Operator: Ridgeway Arizona Oil Corporation

Map Reference: Voight Ranch, Ariz. 7.5 minute, 1971/1984

Staked Footages: 1775 FNL, 1660' FWL

Ownership: State of Arizona

Elevation: 6824 feet

Area Surveyed: Well pad: 300-ft by 300-ft (2.06 acres) surveyed for a well pad with dimensions of 250-ft by 180 feet (1.03 acres)(Figure 3).  
Access rd.: Existing, not surveyed.

Description: Well pad is staked in rolling grasslands just east of rim of small canyon. Almost exclusively grasses with some snakeweed growing on loamy soil covered with nodules of travertine. Pinyon/juniper grow along edge of canyon but not within well pad (Figure 6). Location bordered to north by fenceline with road to south and west.

Cultural Resources: None

Recommendations: Cultural resource clearance is recommended for Ridgeway State 11-1 and existing access road at the location described above.

Well Name: Ridgeway State 35-1

Location: Well pad: SW NE SW Section 35, T12N, R29E  
Access road: [end] NE NW NE Section 11, T11N, R29E, G&SR PM,  
Apache County, Arizona (Figure 2).

Operator: Ridgeway Arizona Oil Corporation

Map Reference: Mesa Parada NW, Ariz. 7.5 minute 1971/1984

Staked Footages: 1660' FSL, 1660' FWL

Ownership: State of Arizona

Elevation: 6689 feet

Area Surveyed: Well pad: 300-ft by 300-ft (2.06 acres) surveyed for a well pad with  
dimensions of 250-ft by 180 feet (1.03 acres) (Figure 3).  
Access rd.: Approximately 7000-ft in-length, 100-ft wide corridor  
(16.1 acres) surveyed for maximum 30-ft wide (4.83 acres)  
easement

Description: Well pad staked on level to gently northwest-sloping terrain in open  
pinyon/ juniper woodland (Figure 7). Mostly grasses with some  
snakeweed. Several small ephemeral drainages on south side of pad.  
Scattered gravels throughout. Access road out of east side of pad and  
follows level ridge line to south over scattered pinyon/juniper covered  
terrain into open grasslands to tie-in with existing ranch road in Section  
11.

Cultural Resources: None

Recommendations: Cultural resource clearance is recommended for Ridgeway State and  
access road at the location described above.



Figure 6. Staked location for Ridgeway State 11-1 looking west.



Figure 7. Staked location for Ridgeway State 35-1, looking west.

## Aneth Field Horizontal Well Producing from Four Laterals

**T**EXACO EXPLORATION & Production Inc has completed a horizontal redrill in southeastern Utah's Aneth field 16 miles east of Bluff producing from four open-hole laterals in Desert Creek.

The F-114 Aneth Unit, ne nw 14-40s-24e, southeastern San Juan County, was completed on pump producing 340 bbls of 42° oil with 192,000 cu-ft of gas and 892 bbls of water per day. Two laterals were drilled northwestward to bottom-hole locations in nw nw of the section. The upper Desert Creek leg is producing from 5604-6597 ft, at a true vertical depth of 5698 ft. Production from the lower lateral is from 5649 to 6660 ft. True vertical depth of the latter borehole is 5767 ft.

The other two horizontal legs were drilled in southeasterly directions to bottom-hole locations in sw ne 14-40s-24e. The upper Desert Creek lateral is producing from 5594-7342 ft (true vertical depth: 5686 ft); the lower lateral is producing from 5790-7009 ft (true vertical depth: 5747 ft).

Superior Oil Co originally completed the well (as the A-8 Navajo) in 1957 producing from Desert Creek at 5678-5811 ft. In 1969, Texaco re-completed the well as an Ismay producer at 5596-5606 ft. Texaco in

1983 worked the well over again, perforating two lower Desert Creek intervals at 5773-90 and 5793-5800 ft.

Log tops, measured from a Kelly bushing elevation of 4872 ft, include Ismay at 5526 ft and Desert Creek at 5675 ft.

## Ridgeway Schedules Delineation Work Near Arizona CO<sub>2</sub> Discovery

**R**IDGEWAY ARIZONA Oil Co has scheduled four stepouts from a carbon dioxide discovery completed by the company earlier this year about 10 miles southeast of St. Johns in eastern Arizona.

The eastern Apache County ventures are designed to evaluate the Fort Apache limestone member of the Permo-Pennsylvanian Supai (Yeso/Abo equivalent) and are projected to depths ranging from 2465 to 2680 ft. They are:

- 2-1 Ridgeway-State, se nw 2-11n-29e;
- 10-1 Ridgeway-State, sw ne 10-11n-29e;
- 11-1 Ridgeway-State, se nw 11-11n-29e;
- 35-1 Ridgeway-State, ne sw 35-12n-29e.

*file 890*

The new locations all are within a mile of an undesignated discovery completed by Ridgeway last month on the crest of the St. Johns Anticline at the 3-1 State 13-53-801, ne se 3-11n-29e. That well flowed 663,000 cu ft of gas per day on a 32/64-inch choke through 88 perforated ft in Fort Apache between 1536 and 1676 ft (PI9-15-95). Ridgeway said preliminary analysis of the gas—performed by the U.S. Bureau of Mines in Amarillo, Texas—indicates it is composed of 89 percent CO<sub>2</sub>, 10 percent nitrogen, 0.7 percent helium and 0.1 percent each of methane and argon.

The 3-1 State 13-53-801 discovery is four miles south of Ridgeway's initial discovery in the area, which was completed last year at the 1 Ridgeway/Canstar-Plateau Cattle Co, se nw 15-12n-29e. The latter well produced CO<sub>2</sub>, helium and nitrogen from Supai at 1410-79 and 1680-1720 ft.

Carbon dioxide from the wells is to be utilized for growing hydroponic greenhouse vegetables in industrial parks now under development by Ridgeway Industries Inc. Both Ridgeway Industries and Ridgeway Arizona Oil are subsidiaries of Calgary-based Ridgeway Petroleum Corp.

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Fife Symington  
Governor

State of Arizona  
**Arizona Geological Survey**

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



Larry D. Fellows  
Director and State Geologist

June 16, 1995

Mr. Clarence Bigelow  
County Manager  
Apache County  
P.O. Box 428  
St. Johns, AZ 85936

Re: Ridgeway #35-1 State, Sec. 35-12N-29E, Apache County, Permit #890  
Ridgeway #10-1 State, Sec. 10-11N-29E, Apache County, Permit #891  
Ridgeway #11-1 State, Sec. 11-11N-29E, Apache County, Permit #892  
Ridgeway #02-1 State, Sec. 02-11N-29E, Apache County, Permit #893

Dear Mr. Bigelow:

Copies of the approved applications to drill the referenced wells in Apache County are enclosed for your information.

These are being provided to you in accordance with a policy of the **Arizona Oil and Gas Conservation Commission** to keep County Governments informed about exploration and development drilling efforts in Arizona. These holes will confirm the extent of carbon dioxide reserves in this area.

The **Commission** issues permits to drill pursuant to A.R.S. § 27-516 after determining that the well is in compliance with all applicable rules and law and that public health and safety, correlative rights, and subsurface resources will not be compromised.

Do not hesitate to contact me if I may be of further assistance.

Sincerely,

Steven L. Rauzi  
Oil and Gas Program Administrator

Enclosures

c Commissioners Nations, Worthington, Clay, Lanshe, Veal



Fife Symington  
Governor

State of Arizona  
**Arizona Geological Survey**

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



Larry D. Fellows  
Director and State Geologist

October 17, 1995

Mr. Walter B. Ruck, President  
Ridgeway Arizona Oil Corporation  
1080, 700 4th Avenue S.W.  
Calgary, Alberta T2P 3J4

Re: Ridgeway #35-1 State, Sec. 35-12N-29E, Apache County, Permit #890  
Ridgeway #10-1 State, Sec. 10-11N-29E, Apache County, Permit #891  
Ridgeway #11-1 State, Sec. 11-11N-29E, Apache County, Permit #892  
Ridgeway #02-1 State, Sec. 02-11N-29E, Apache County, Permit #893

Dear Mr. Ruck:

Approved duplicate original Applications for Permit to Drill the referenced wells; Permits to Drill 890, 891, 892, 893; and filing fee receipts #3085, 3084, 3083, and 3082 are enclosed. Samples, logs, and completion report are required pursuant to A.A.C. R12-7-121. *A copy of the Permit to Drill should be posted in a conspicuous place at the well site*

These Permits are issued on the condition that you conduct operations substantially as outlined in the drilling programs submitted with the applications to drill and that you *notify me at least 48 hours* before you:

- 1) Commence drilling operations;
- 2) Run and cement surface casing; and
- 3) Nipple up and test the BOPE prior to drilling out of the surface casing.

The Oil and Gas Conservation Commission of the State of Arizona looks forward to successful completions of these wells.

Sincerely,

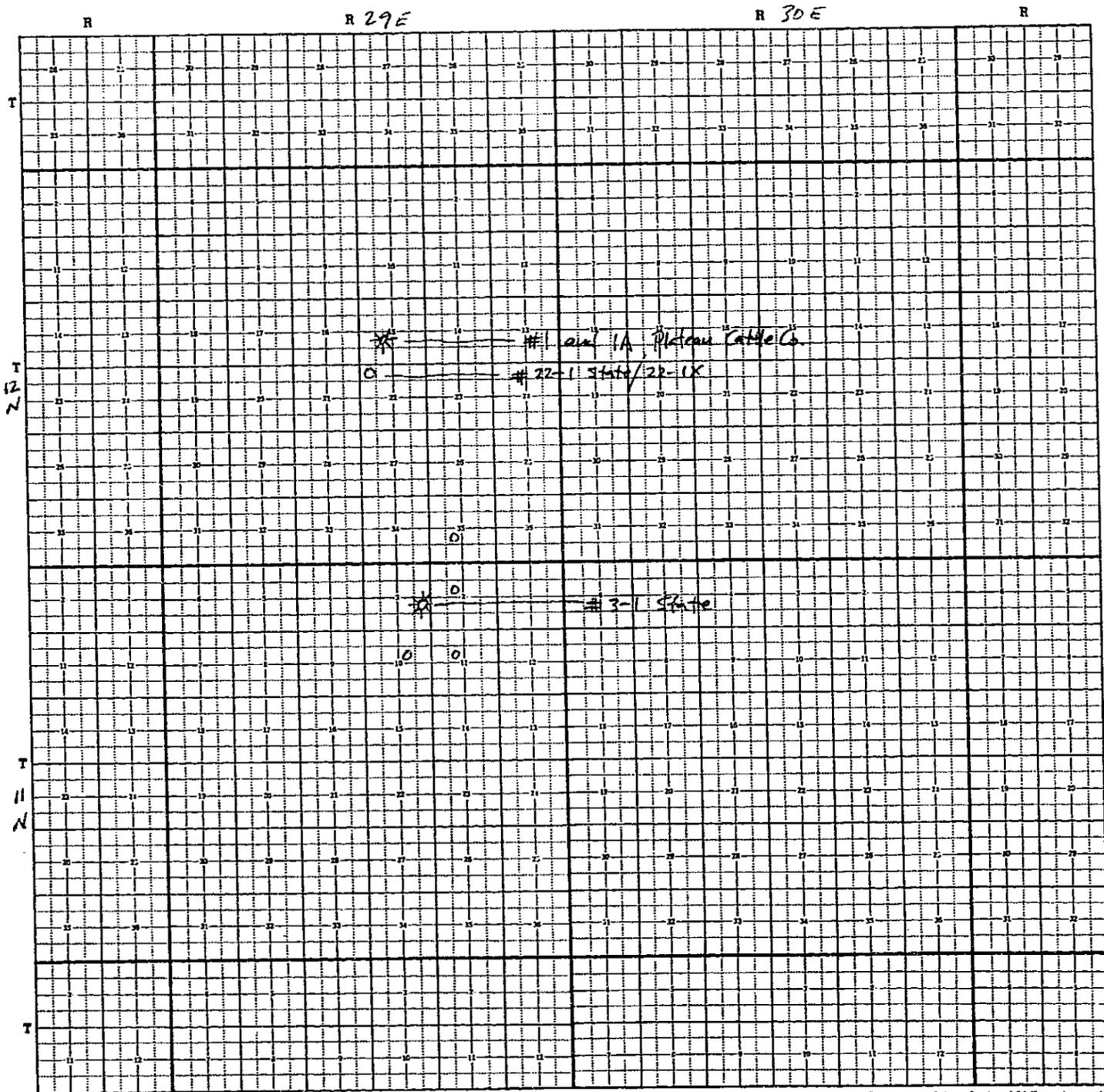
Steven L. Rauzi  
Oil & Gas Program Administrator

Enclosures

c Alan Emmendorfer, Farmington, New Mexico

No. 4B. TOWNSHIP PLAT. - Bradford-Robinson Co., Mfrs. Robinson's Legal Blanks, 1824-46 Stout Street, Denver, Colorado

County Apache State Arizona



Four Township Island plat (1/4" to the mile)