

# State of Arizona Oil and Gas Conservation Commission

1110 W. Washington Street, Phoenix, AZ 85007 602-402-3483 www.azogcc.az.gov Samantha Roberts. Oil and Gas Administrator Commissioners:
Frank Thorwald, Chair
J. Dale Nations, Ph.D., Vice Chair
William C. Feyerabend
F. Michael Conway, Ph.D.
James (Jim) Ballard
Robyn Sahid, Land Commissioner
Ex Officio (non-voting member)

# NOTICE OF COMBINED PUBLIC MEETING AND POSSIBLE EXECUTIVE SESSION ARIZONA OIL AND GAS CONSERVATION COMMISSION

Pursuant to A.R.S. § 38-431.02, notice is hereby given to the members of the Arizona Oil and Gas Conservation Commission (AZOGCC) and to the general public that the AZOGCC will hold an open public meeting:

Friday, September 27, 2024 10:00 A.M. MST Phoenix, AZ via Zoom using the link below:

https://us02web.zoom.us/j/88514793170?pwd=eDVIYkszdS9YOUkyL3ZaOE9mYnllQT09

Dial in:

+1 669 444 9171 US

Meeting ID:

885 1479 3170

Passcode/Participation ID:

408996

Please join a few minutes early to avoid technical difficulties and keep all microphones muted except when speaking. This virtual meeting will be recorded. If you experience difficulties logging into the meeting please contact Andrew Foss, Oil and Gas Project Manager, at <a href="mailto:foss.andrew@azdeq.gov">foss.andrew@azdeq.gov</a> or (602) 618-3588 for technical assistance.

Executive Session: Pursuant to A.R.S. § 38-431.03(A)(3), the AZOGCC may vote to go into executive session, which will not be open to the public for the purposes of obtaining legal advice on any item on the Agenda.

### **CALL TO ORDER**

**1.** Establish a quorum and conflicts of interests.

### AGENDA ITEMS FOR DISCUSSION, CONSIDERATION, AND POSSIBLE ACTION:

- 2. Administrator Updates Samantha Roberts:
  - a. Abandoned Wells Arizona Public Service

- i. Vote on approval to return bond for Well #0909 (Attachment A): static.azdeq.gov/ogcc/well 0909.pdf (Attachment A)
- ii. Vote on approval to return bond for Well #0911: <a href="mailto:static.azdeq.gov/ogcc/well\_0911.pdf">static.azdeq.gov/ogcc/well\_0911.pdf</a> (Attachment B)
- b. Orphan Well Program Status Update Tina LePage
- 3. Executive Session Presentation by Attorney General, Rick Zeise, for AZOGCC Discussion on Open Meeting Law
- 4. AZOGCC Chairman Frank Thorwald Report
- 5. Call to the Public:

Members of the public may address the AZOGCC during this Call to the Public. In the interest of maintaining an orderly meeting, comments shall not exceed three minutes per speaker. For any specific issues, the total comment period shall not exceed ten minutes per side. If a member of the public wishes to speak, they may unmute their telephone by pressing \*6.

Pursuant to A.R.S. § 38-431.01(H), the AZOGCC members shall not discuss or take legal action on matters raised during an open call to the public unless the matters are properly noticed for discussion and legal action. As a result of public comment, the AZOGCC members may respond to criticism, may direct staff to review a matter, or may ask that a matter be placed on a future agenda.

- 6. AZOGCC Requests for Future Agenda Items
- 7. Announcements
- 8. Adjournment of the AZOGCC

For additional information about this meeting, contact Samantha Roberts, Oil and Gas Program Administrator, <a href="mailto:azogcc@azdeq.gov">azogcc@azdeq.gov</a> or (602) 402-3483. At least 24 hours prior to any meeting, a copy of the agenda will be available for public inspection at the Arizona Department of Environmental Quality (ADEQ), 1110 W. Washington Street, Phoenix, AZ 85007, or online at <a href="http://azogcc.az.gov/notices">http://azogcc.az.gov/notices</a>. A copy of material provided to AZOGCC (with exception to material relating to possible executive sessions) are available for public inspection upon request by contacting the ADEQ Records Center at (602) 771-4380 or (800) 234-5677.

ADEQ will take reasonable measures to provide access to department services to individuals with limited ability to speak, write or understand English and/or to those with disabilities. Requests for language translation, ASL interpretation, CART captioning services or disability accommodations must be made at least 48 hours in advance by contacting the Title VI Nondiscrimination Coordinator, Leonard Drago, at 602-771-2288 or Drago.Leonard@azdeq.gov. For a TTY or other device, Telecommunications Relay Services are available by calling 711.

ADEQ tomará las medidas razonables para proveer acceso a los servicios del departamento a personas con capacidad limitada para hablar, escribir o entender inglés y/o para personas con discapacidades. Las solicitudes de servicios de traducción de idiomas, interpretación ASL (lengua de signos americano), subtitulado de CART, o adaptaciones por discapacidad deben realizarse con al menos 48 horas de anticipación comunicándose con el Coordinador de Anti-Discriminación del Título VI, Leonard Drago, al 602-771-2288 o Drago.Leonard@azdeq.gov. Para un TTY u otro dispositivo, los servicios de retransmisión de telecomunicaciones están disponible llamando al 711.



October 4, 2018

Mr. Nicholaus Fischer Vice President Merit Partners 2555 E. Camelback Road, Suite 180 Phoenix, Arizona 85016

SUBJECT: WELL ABANDONMENT – SUNCOR 1-24 OIL & GAS STORAGE WELL, GOODYEAR, AZ

Dear Mr. Fischer:

Southwest Groundwater Consultants (SGC) has prepared the following report documenting the abandonment of the SunCor 1-24 Oil & Gas Storage Well located northeast of the intersection of Indian School Road and Cotton Lane in Goodyear, Arizona. The location of the well is shown in Figure 1 included as Attachment 1.

### BACKGROUND INFORMATION

Information regarding 1-24 Oil & Gas well is presented below.

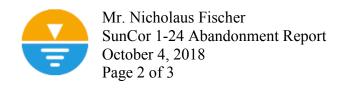
	SunCor 1-24
Cadastral Well Location	B (2-2) 24 CCC
Date Installed	February 2002
Total Depth (feet)	6,053

### **Abandonment Application**

SGC prepared a well abandonment application and submitted it to the Oil & Gas Conservation Commission for approval. Final approval was granted by the Oil & Gas Conservation Commission in a letter dated March 8, 2018. A copy of the approval letter is included as Attachment 2.

#### **Abandonment Procedures**

Southwest Waterworks Contractors, Inc. (Southwest Waterworks) was contracted to abandon the well. Southwest Waterworks contracted Longmire Well Service (Longmire) to conduct a downhole color video survey of the well on August 22, 2018 to confirm the well casing was open to a depth of at least 2,100 feet below land surface (bls). Visibility throughout much of the video was poor. A soft fill material was encountered at approximately 1,810 feet bls and the video camera could not be advanced beyond that depth. The well casing was observed to be in good condition and was open to the depth approximately 1,810 feet bls. Although the well was listed as being greater than 6,000 feet deep, it was assumed that the well had been previously plugged



with cement from total depth to just below approximately 1,800 feet bls. A copy of the well video on CD is included as Attachment 3.

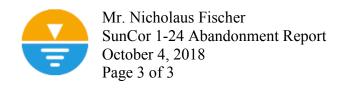
Instead of simply placing cement of top of the existing surface, Longmire was contracted to install a steel bridge plug in Well 1-24 at the approximate depth of 1,800 feet bls to ensure that a confirmed bridge was in place prior to placing cement slurry. Longmire installed a custom made corrugated steel plug that had a diameter slightly less than the existing well casing. The plug was swaged in place on September 11, 2018. Photographs of the bridge plug are included in Attachment 4.

No documentation of the completion of a cement bond log was available for the 1-24 well. In order to confirm that no annular space was "open" to the surface behind the well casing, SGC contracted Geolog, LLC (Geolog) to perform a cement bond log from the depth of 1,800 feet bls to the ground surface. Geolog conducted a cement bond log of well 1-24 on August 28, 2018. The cement bond log performed by Geolog confirmed the annular space behind the casing was cemented. A copy of the cement bond log conducted by Geolog is included as Attachment 5.

Well 1-24 was abandoned by filling with a cement slurry in two lifts by pumping through a tremie pipe. Prior to pumping through the tremie pipe, the cement grout was passed through a 2-inch slotted bar strainer, in order to remove any unmixed lumps. Approximately 6 cubic yards of cement slurry were placed during the initial lift on September 19, 2018 followed by a second lift of approximately 30 cubic yards on September 20, 2018. The second lift brought the cement in the well to within approximately 10 feet of ground surface.

Final abandonment activities included removing the upper 10 feet of well casing materials; placing a permanent steel plate with the well name, former operator, lease number, and well location permanently engraved over the remaining casing materials; placing a granular material infused with a bright colored permanent dye; and backfilling the remaining portion of the excavation with clean imported fill material. The fill material was compacted using a hand operated vibrating compactor, bucket tamping, and wheel rolling. A sign post, with pertinent well information, was placed at the abandoned well location; although it is understood the need for a permanent marker post was waived by the Oil & Gas Conservation Commission and this sign may be removed pending future development of the property. Photographs documenting the abandonment procedures are included as Attachment 4.

The well location was surveyed by an Arizona Licensed surveyor on September 26, 2018. A copy of the survey information is included as Attachment 6. A completed "Plugging Record" was prepared for the abandonment and is included as Attachment 7.



If you have any questions or require additional information, please call.

Sincerely,

**Southwest Groundwater Consultants** 

Kevin D. Hebert, R.G.

Senior Project Hydrogeologist

Attachments: Attachment 1: Figure 1

Attachment 2: Application Approval Letter

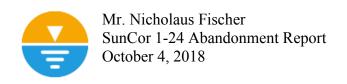
Attachment 3: Well Video

Attachment 4: Abandonment Photographs

Attachment 5: Cement Bond Log

Attachment 6: Well Coordinate Survey

Attachment 7: Plugging Record



### FIGURE 1





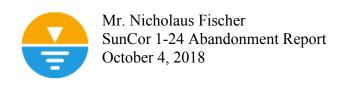
October 3, 2018 Project 18-573

# WELL LOCATION MAP SUNCOR 1-24 OIL & GAS WELL

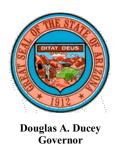
Maricopa County, Arizona

Figure

1



### APPLICATION APPROVAL LETTER



### State of Arizona

#### **Oil and Gas Conservation Commission**

1110 W. Washington Street, Phoenix, AZ 85007 602-771-4501 www.azogcc.az.gov

Dennis L. Turner, Oil and Gas Administrator

Commissioners: Frank Thorwald, Chair Vice Chair, vacant Stephen R. Cooper William C. Feyerabend J. Dale Nations, Ph.D.

#### VIA EMAIL and US MAIL

March 8, 2018

Mr. Bob Bambauer Senior Vice President Sunbelt Holdings 6720 North Scottsdale Road, Suite 250 Scottsdale, AZ 85253-4424

RE: Arizona Oil and Gas Conservation Commission Reconsideration of Approval of the Sunbelt Holdings Plug and Abandonment of the Copper Eagle #1-19 (permit 911) and Copper Eagle #1-24 (permit 909) Wells at the Meeting of January 12, 2018

Dear Mr. Bambauer:

As you may recall, the Arizona Oil and Gas Conservation Commission (OGCC or Commission) approved the plug and abandonment process for Sunbelt Holdings (Sunbelt) for wells Copper Eagle #1-19 (permit 911) and Copper Eagle #1-24 (permit 909) in the meeting of January 12, 2018. Sunbelt requested modification of the Commission's ruling and clarification of the Dennis Turner follow up letter of January 31, 2018. The Commission properly noticed the Sunbelt request for modification of the previous order, which was brought forward at the Commission meeting of February 23, 2018.

The Commission again appreciates your time and input at the public meeting on February 23, 2018 to reconsider two of the Commission's eleven directives as approved in the January 12, 2018 meeting. The directives were described in my letter of January 31, 2018.

At the February 23, 2018 meeting, the OGCC voted to amend two of the directives that were reflected in my previous letter. The two directives are modified as follows:

- Sunbelt Holdings shall install a permanent bridge plug at the approximate top of the salt body in each well. At Sunbelt's discretion, the bridge plug may be either cast iron or steel. The Commission recommended the bridge plug be placed at a minimum depth of 2100 feet in both wells.
- 3. In each well, below the permanent bridge plug, the borehole may remain filled with brine or water (its current state), instead of filling it with plugging mud, as required by Arizona Administrative Code (A.A.C.) R12-7-127(D).

Other than the two directives as modified above, the remaining directives are unchanged. In placing the permanent bridge plug, Sunbelt shall fill the entire wellbore with plugging cement to the surface. The preferred plugging cement slurry is that recommended by the American Petroleum Institute (API) Environmental Guidance Document: Well Abandonment and Inactive Well Practices for U.S. Exploration and Production Operations, i.e., a neat cement slurry mixed to API standards. The plugging cement slurry shall be allowed to cure for the times specified by API before proceeding with excavation work.

Mr. Bambauer p. 2

In the February 23, 2018 meeting, the OGCC also discussed the absence of any data verifying casing integrity and cement bonding in the 1-24 well. During this meeting, Sunbelt agreed to confer with Schlumberger, the logging company who originally ran the logs in both wells, to determine the best way to evaluate whether the cement bond and casing integrity are adequate for plugging the 1-24. Sunbelt agreed to provide the Commission with the results of that discussion with Schlumberger. The first directive of the Commission, as contained in my January 31, 2018 letter, remains unchanged; the Commission expects assurance from the operator that the 1-19 wellbore is isolated from the formations it penetrated above the Luke salt deposit.

Enclosed is your copy of the approved Application to Plug and Abandon the 1-19 well. Please advise me via email (preferred) or phone at least 48 hours in advance of the work commencing on this well. When the plugging work is completed on this well, in accordance with R12-7-127(I), submit a completed Form 10 within 15 days. Download this form at <a href="http://www.azogcc.az.gov/forms">http://www.azogcc.az.gov/forms</a> . Forms 9 and 10 should be submitted both electronically and via US Mail.

Please direct any questions and address all correspondence to:

Dennis L. Turner
Oil & Gas Administrator
Arizona Oil & Gas Conservation Commission
c/o Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, AZ 85007
ogcc@azdeq.gov

Sincerely,

CC:

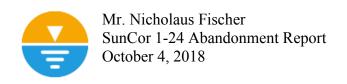
Dennis L. Turner

Oil & Gas Program Administrator

Dennis L. Turner

Frank Thorwald, Chairman, Arizona Oil and Gas Conservation Commission (email only)

Kevin Hebert, Southwest Groundwater Consultants

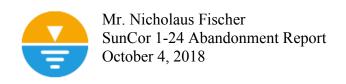


WELL VIDEO (ON CD)



# **Downhole Video Survey Log**

Project No.: 18-573				_	Job Title:	SunCor 1-24 Oil & Gas Well			
ADWR Well No.: 55- Not Applicable				_Cadastral	Location:	B (2-2) 24 CCC			
Video Date: 8/22/2018						8/23/2018			
Survey Company: Longmire Well Service				Revi	ewed By:	K. Hebert			
Total Depth:		Zer	o Datum:						
Casing Dia.: 12 Inches (ID)				Stick-up Co	orrection:	NA	Feet		
Perf Interval(s): None Observed			_	orrection:		Feet			
Type of Perfs:	NA			Static Wa	ter Level:	NA	Feet		
Depth Below Datum:	Water Clarity <sup>1</sup>	Encrustation		Est. Debris Perf or Openings <sup>2</sup> Fill			Remarks		
feet <sup>3</sup>		extent <sup>4</sup>	color		Yes / No				
0-1,810 0:00	cloudy	none	na				poor; no perforations observed		
0.00	na					Soft fill encou	ntered; end of video		
				W T					
	1								
				1					
	- clear, clou - None, ligh		2 heavy	- full, partial,	none	3 - De	epth displayed on video		



**ABANDONMENT PHOTOGRAPHS** 



View of swage tool and bridge plug



View of base of bridge plug



View of cement being poured into on-site strainer



View of cement being placed down 1-24 well through tremie pipe



Upper 10' of 1-24 well casing being removed



Backfill material being compacted in 1-24 excavation



View of metal plate placed over tubular casing at base of 1-24 excavation



View of permanent dyed granular material over top of metal plate



View of imported fill material being compacted in excavation



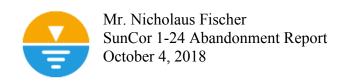
View of imported fill material being compacted in excavation



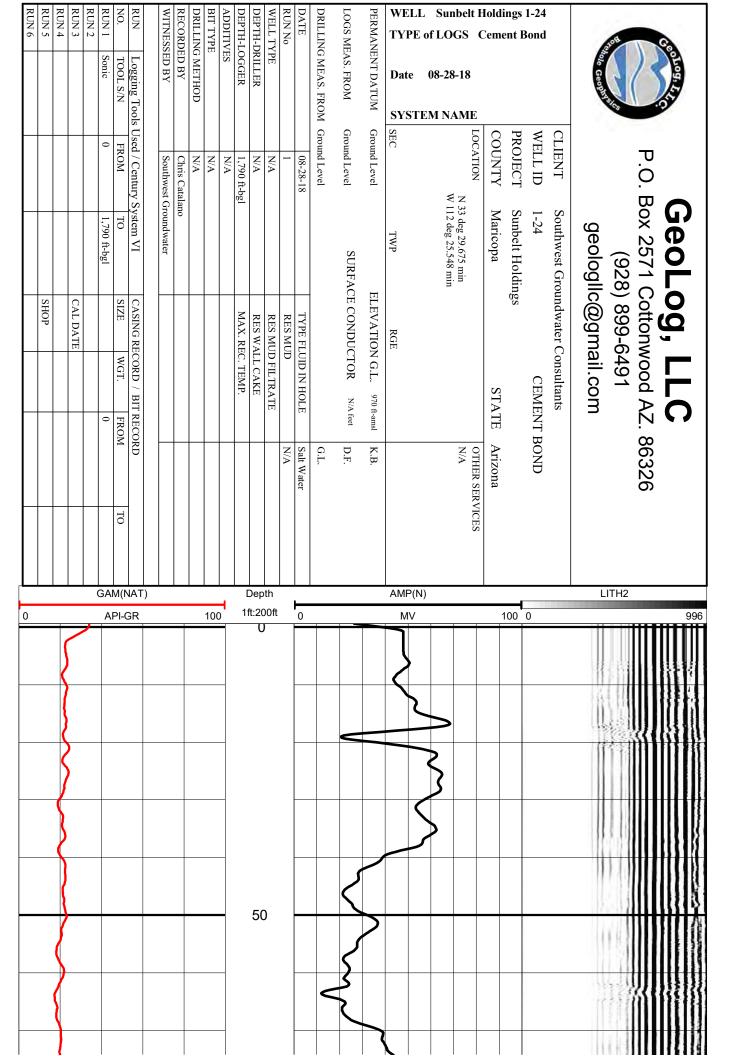
View of final site surface with well identification marker

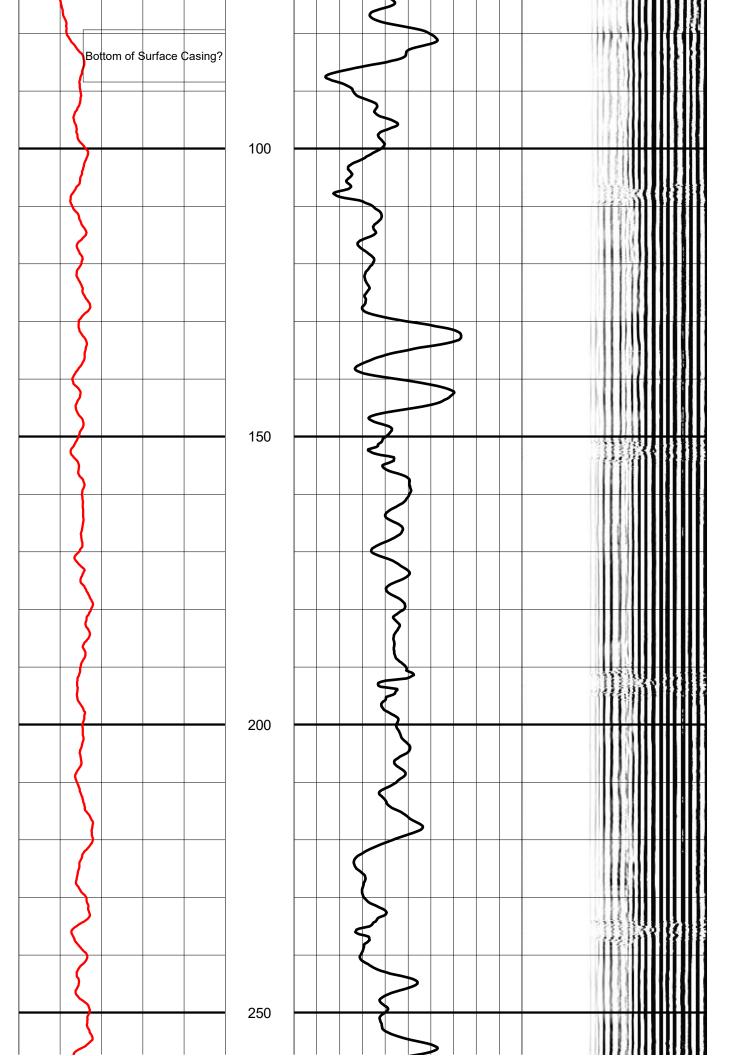


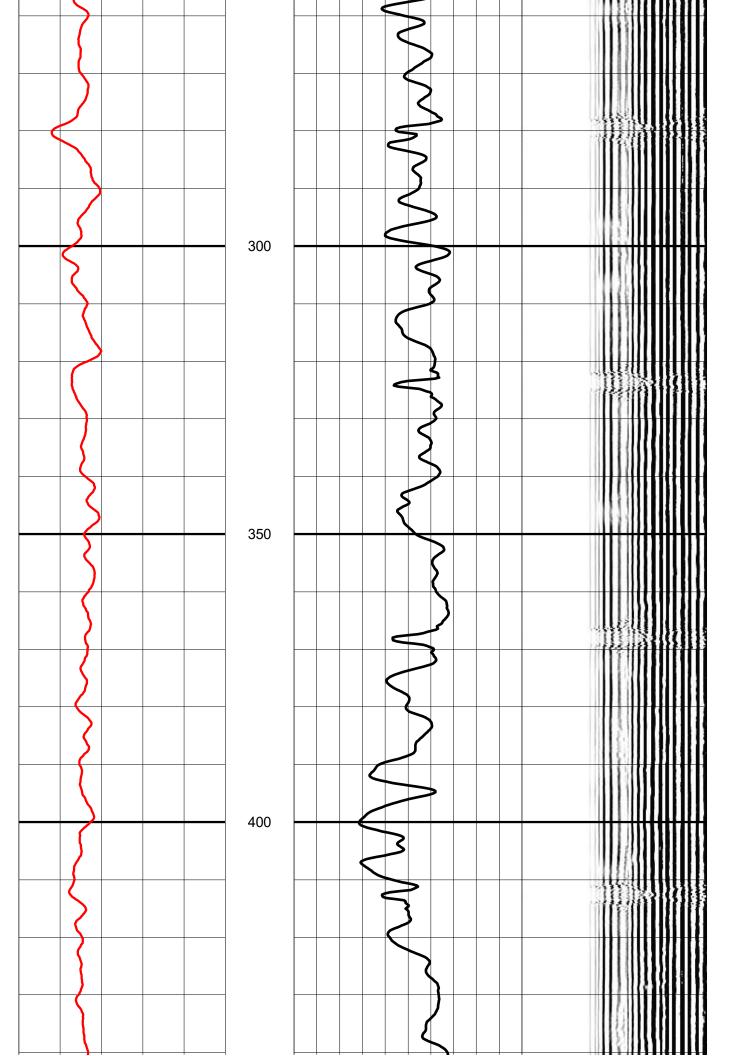
View of surface well identification marker

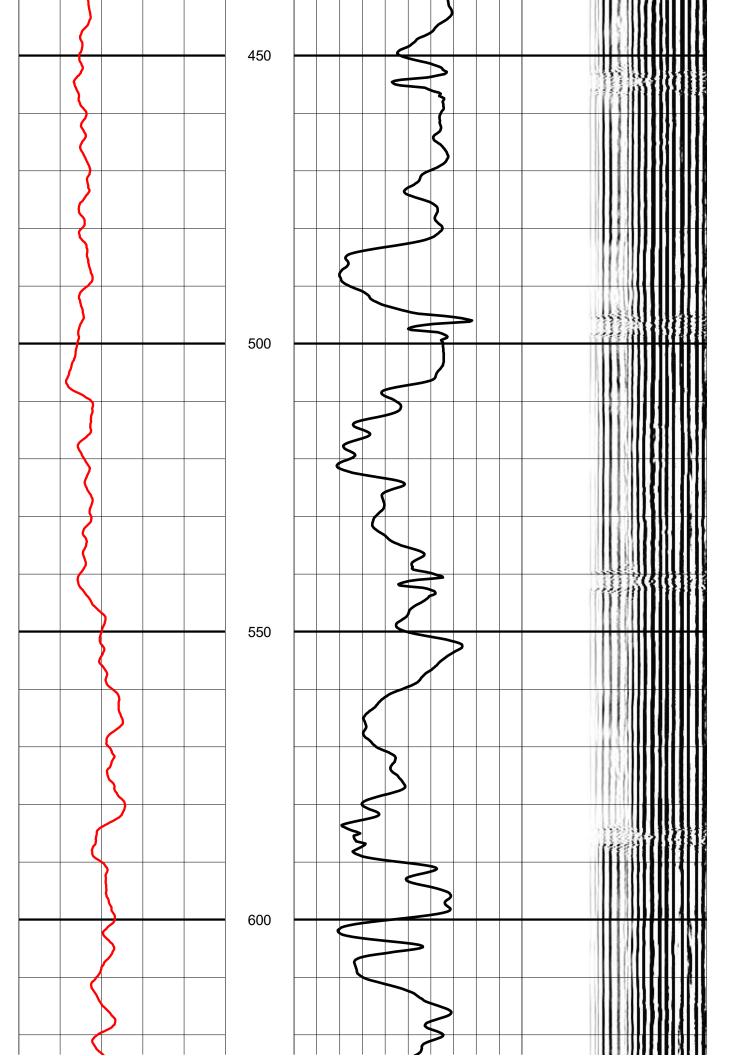


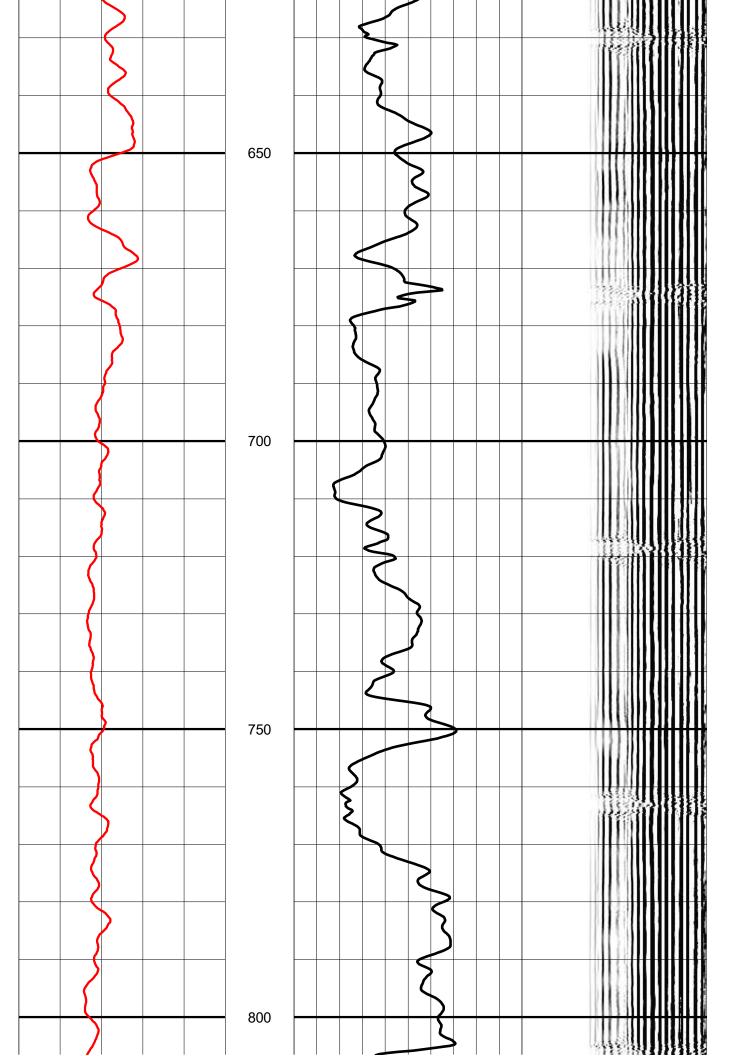
**CEMENT BOND LOG** 

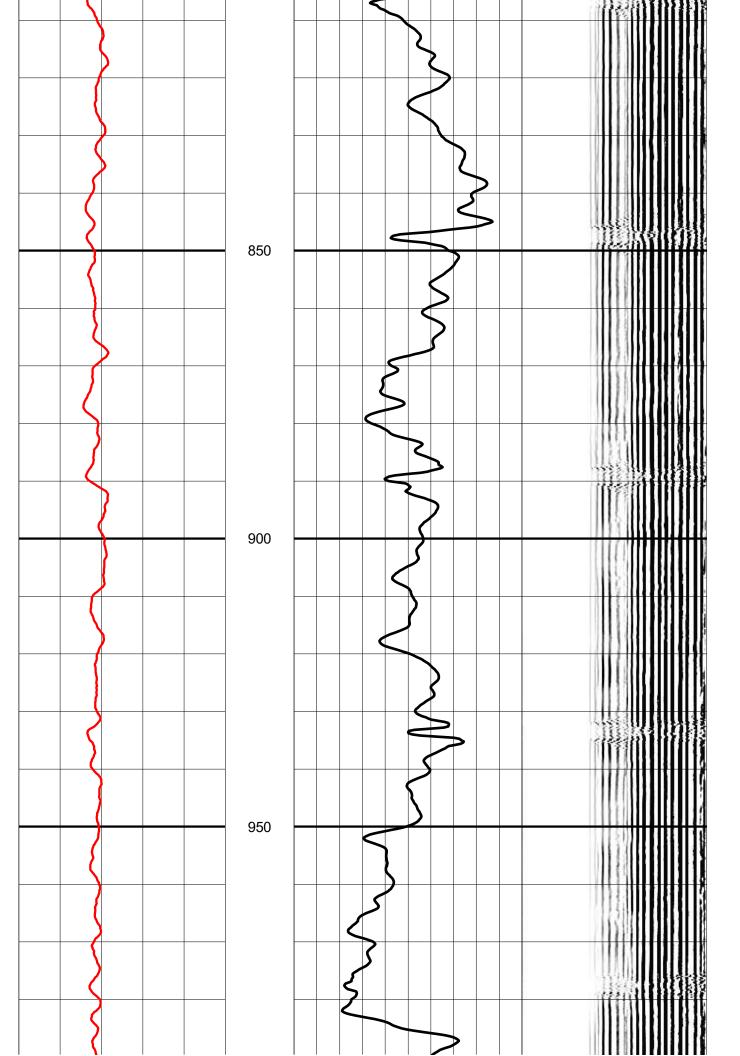


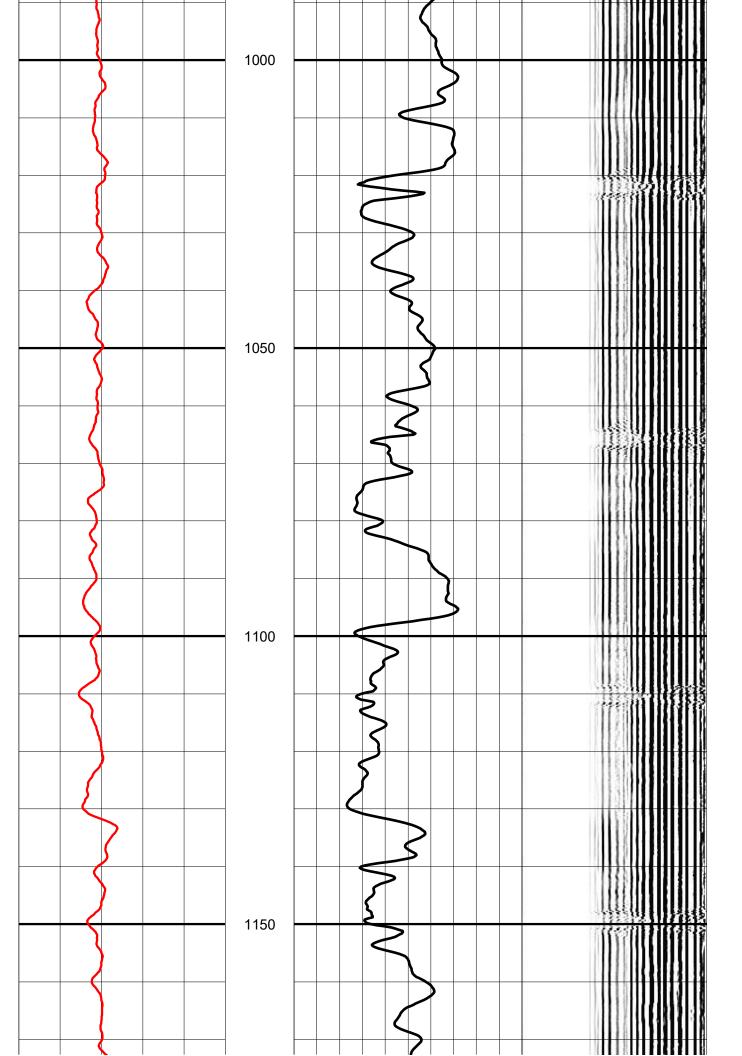


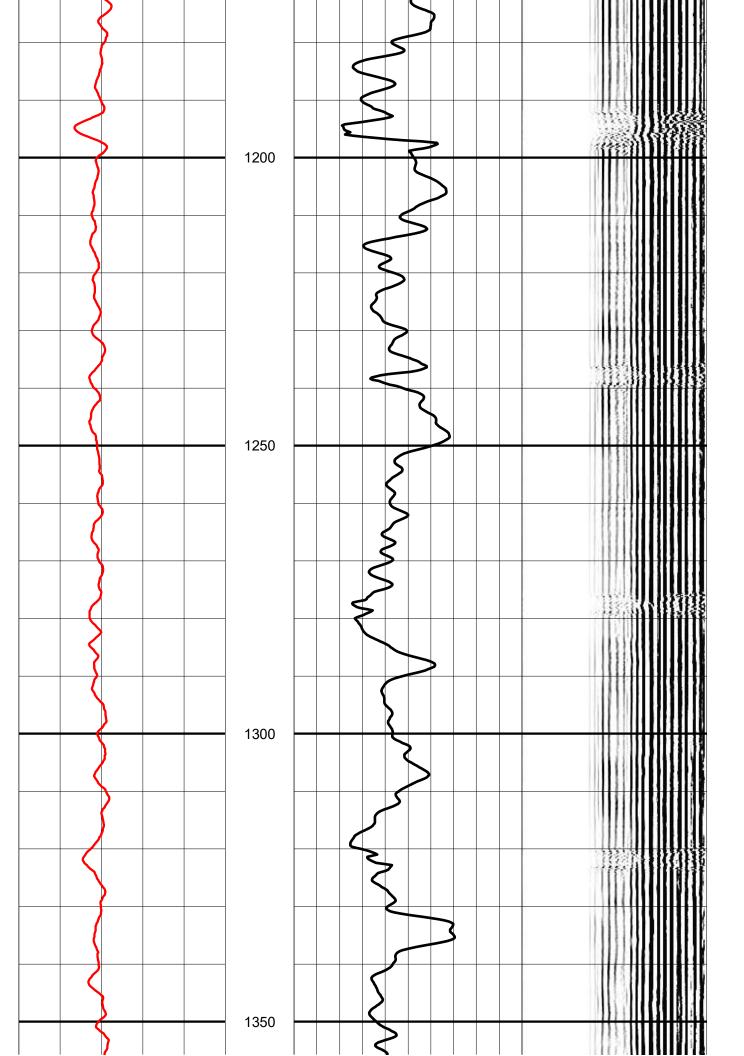


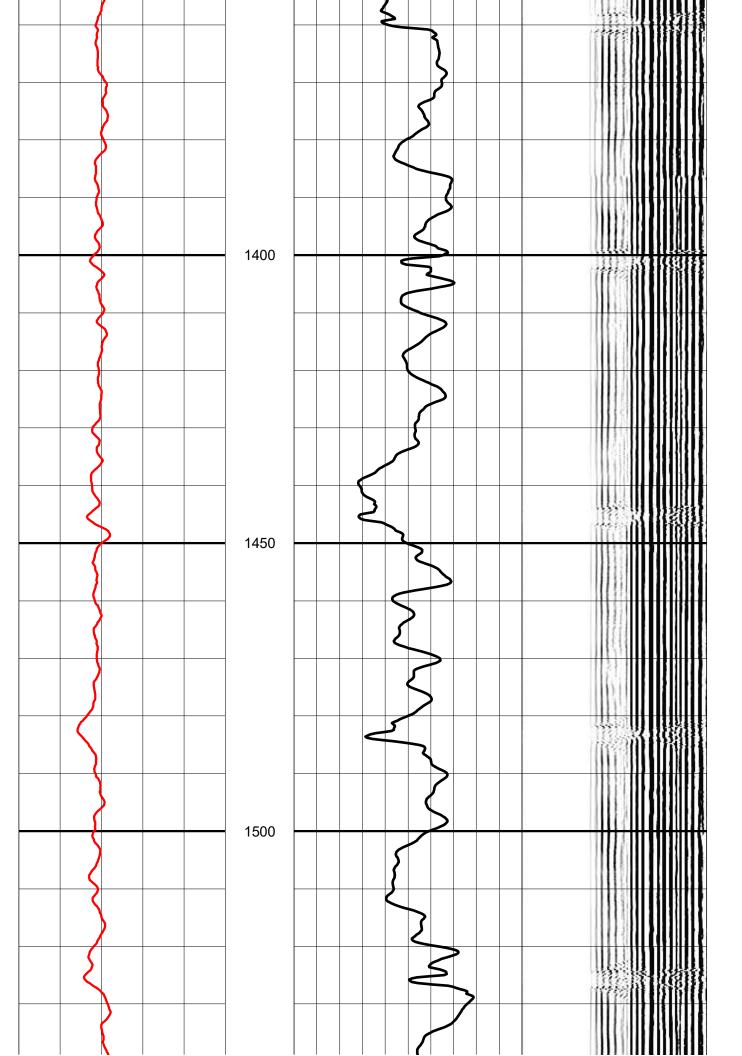


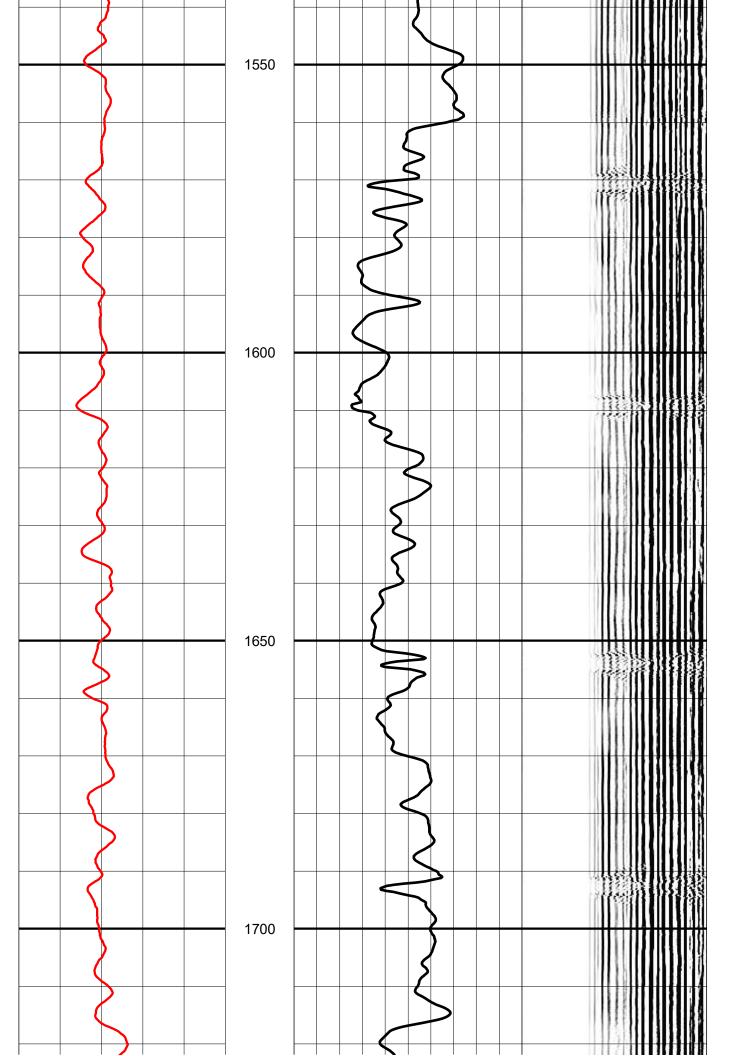


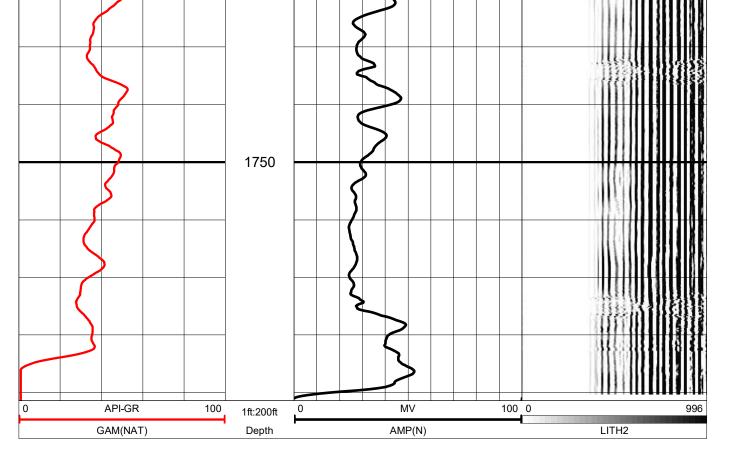


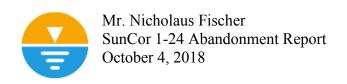












WELL COORDINATE SURVEY



K – WEST SURVEYING, INC. P.O. BOX 509 AVONDALE, AZ 85323 PHONE: 623-536-8248 FAX: 623-536-8247 CELL: 602-320-2333

E-MAIL: kwestsurvey@cox.net

September 26, 2018

Southwest Groundwater Consultants

Attn.: Kevin D. Herbert

Re: Copper Eagle Gas Storage, LLC
Luke-Glendale (Wildcat)
SUNCOR Development 1-24
B(2-2) 24CCC
NE. Corner Indian School Road & Cotton Lane
Goodyear, Arizona

NORTHING EASTING 1-24 Well (3" Dia. Post) 907888.165 544798.641

Coordinates are State Plane NAD 83, Central Arizona Zone.

BASIS OF COORDINATES:

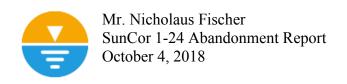
Record of Survey PLSS Subdivision GDACS: Book 652 of Maps, Page 22. Coordinates Point No.'s: 51080-1M and 51076-1

Any question regarding this matter please contact K-West Surveying at the above information.

Wade H. Shaffer R.L.S.

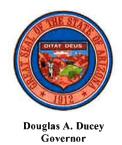
Vice-President





PLUGGING RECORD

			PLUG	GING	G RE	CORD					
Operator	nerly Copper Eagle Gas	Storage LLC				ess & Phone	e numb	er			
Federal, State, or Indian Lease No. or lessor's name if fee lease				We 1-24	Not Applicable						
	tion: B (2-2) 24 C							- Twp - Rge		County Maricopa	
Application to dr. Copper Eag	Has this well ever produced oil or gas? No					npletion (initia Gas (Me Not Applical	CF/day)	Dry?			
Date plugged			Total depth	Amount well producing when plugged							
September 20, 2018			1,800 fee	Not	Not Applicable Not Appl			MCF/day) able	Water (bbls/day)		
Name of each formation containing oil or gas. Indicate which formation open to wellbore at time of plugging			ent of each formatio	Depth interval of each formation				Size, kind & depth of plugs used. Indicate zones squeeze cemented, giving amount of cement			
Not A	Not Applicable										
					+						
			CAS	SING	RECOR						
Size pipe	Put in well (ft.)	Pulled out			Give de method	Give depth and method of parting casing (shot, etc.)		F	Packers and shoes		
24"	80'	10'	70'								
13 3/8"	3,060'	10'	3,050	•							
9 5/8"	5,730'	10'	5,720	)'							
Was well fill Well was cemented	ed with heavy drilling from 10' to 1,800 feet	mud, accord	ing to regulations?		Indicat	e deepest f	ormatio	on containing	fresh water		
/	NAME AND ADDR	RESSES OF	ADJACENT LE	ASE (	OPERAT	TORS OR	OWN	ERS OF TH	IE SURFACE		
Name		Addre	ess	Direc				Direction	tion from this well		
	None										
operations to bas	er information require se of fresh water sand g completion of this w	d, perforated i	interval to fresh wa	iter sar	nd. name	and addres	ss of si	urface owner.	and attach le	tter from surface	
			Not	t <b>A</b> pp	olicable	)					
Use reverse sid	e for additional det	tail									
CERTIFICATE: I, Southwest Groundy	the undersigned, un	der the penal			_				v to make this	of the report; and that this	
report was prepar	ed under my supervi	sion and dire									
10/3/18						lun	1.1.1				
Date				-	Siç	gnature	WW4				
				-							
Mail <u>one</u> copy of completed form to: Oil and Gas Program Administrator						011 9 0		TATE OF A			
	Arizona Do	epartment of E Vashington Str	Environmental Qualit	ty		OIL & G	AS C	Plugging F	ATION CON Record	IMISSION	
Permit No.	File two copies: one by mail, one electronically Form No. 10										



### State of Arizona

### Oil and Gas Conservation Commission

1110 W. Washington Street, Phoenix, AZ 85007 602-771-4501 www.azogcc.az.gov

Dennis L. Turner, Oil and Gas Administrator

Commissioners:
Frank Thorwald, Chair
J. Dale Nations, Ph.D., Vice Chair
Stephen R. Cooper
William C. Feyerabend

September 11, 2018

VIA EMAIL and U.S. MAIL

Mr. Nicholaus Fischer Vice President Merit Partners Inc. 2555 East Camelback Road, Suite 180 Phoenix, Arizona 85016

RE: Inspection Report for Copper Eagle 1-24 Inspected on August 28, 2018

Dear Mr. Fischer:

Enclosed are is an Inspection Report for the subject wellsite. This was a routine inspection/ site visit by the Arizona Oil and Gas Conservation Commission to observe the cement bond log run. There were no compliance issues associated with this site visit.

The enclosed document is for your records.

Feel free to contact me at ogcc@azdeq.gov or (602) 771 – 4501, if you have any questions.

Sincerely,

Dennis L. Turner

Oil & Gas Program Administrator

Dennis C Tell

cc: Kevin Hebert, R.G., Southwest Groundwater Consultants (email only)



## State of Arizona

## Oil and Gas Conservation Commission

1110 W. Washington Street, Phoenix, AZ 85007 602-771-4501 www.azogcc.az.gov

Dennis L. Turner, Oil and Gas Administrator

Commissioners: Frank Thorwald, Chair J. Dale Nations, Ph.D., Vice Chair Stephen R. Cooper William C. Feyerabend

# Oil and Gas Administrator's Field Inspection Report

Company Name:		Inspection ID #: 308483	Case ID #: N/A			
Customer ID #: 77		•	•			
Place Name: Copp Place ID #: 180967	_	Inspector(s): Dennis L. Turner				
County: Maricopa		Arrival Date and Time: 8/28/2018, 1:00 pm.				
	NE cor. Cotton Lane and Indian School					
,	Rd., Phoenix, AZ	Reason for Inspection:				
Mailing Address:	2555 East Camelback Road, Suite 180 Phoenix, Arizona 85016	☐ Complaint  Complaint No.:				
Physical Address:	NE cor. Cotton Lane & Indian School Rd., Phoenix, AZ	⊠ Routine Inspection				
	ew locations): 33° 29′ 40.3" N 112 ° 25′ 32.8" W ; el.: ft.	☐ Follow-Up Original Inspection Rep	ort No.:			
Permit No.: 0912		Was Inspection Announced?				
Onsite Contact Per	rson(s)/Title(s)/phone:	⊠ Yes □ No				
Kevin D. Hebert, R.0 602.515.0295 ofc. 602.908.2973 cell	G., Southwest Groundwater Consultants	Operational Status: Spud date: 12/22/2001 T.D. and date: 6052' temp. abdn. 2/3/2002				
Other Names for S	ite/Facility: SunCor Development Co.	Last Inspection: enter a date.	N/A			
Inspection Report	Issued: Via email from ADEQ office	Facility Initial:	OGCC Initial:			
	were noted during the course of the inspencies were noted during the course of the		·			
Comments:						
Observe cement be	ond log run.					
Chris Catalano, Geo	oLog, LLC., logging operator					
Attachments:						
Notice of Inspectio	n Rights					
Choose an item.						

Form updated 11/2017 Page 1



# ARIZONA OIL AND GAS CONSERVATION COMMISSION NOTICE OF INSPECTION RIGHTS

FACILITY INFORMATION	OGCC INFORMATION
Facility Name (Place): Copper Eagle 1-24	Date of Inspection: 8/28/2018
Physical Location (Facility): NE cor. Cotton Lane and Indian School Rd.,	County: Maricopa
Phoenix, AZ	Inspector: Dennis Turner
Mailing Address: 2555 East Camelback Road, Suite 180	<b>Telephone:</b> 602/771-4501
Phoenix, Arizona 85016	Accompanied by:
Responsible Party: Nicholaus Fischer, VP	
<b>Telephone:</b> 602-316-3754	ADEQ Follow-up Contact: Balaji Vaidyanathan
On-Site Representative: Kevin D. Hebert, R.G., 602/515-0295	Facilities Emissions Control Section
Title: Senior Project Hydrogeologist	Title: Manager
Email: khebert@swgroundwater.com	<b>Telephone:</b> (602) 771-4527
The Arizona Oil And Gas Conservation Commission (OGCC) representative(s) identified ab date and time. Upon entry to the premises, the OGCC representative(s) met with me, present representative(s) and explained:    That the purpose of the inspection is to determine:   Compliance with Title 27 of the Arizona Revised Statutes, Title 12 of the Arizona Admin Permit/Agreement Numbers: 0912   Qualification for a license issued pursuant to:   A.R.S. § 27-513, and A.A.C. R12-7-104   That this inspection is conducted pursuant to the authority granted in A.R.S. § 27-503 and A.A.C. R12-7-110(D)   That the state shall not be barred by the statutes of limitations of actions, according to A. concerning certain claims based on navigability of watercourses. According to 28 U.S.C. within 5 years after the date the claim first accrued.   Possible applicability of Small Business Bill of Rights pursuant to Arizona Revised Stat. That the fee for this inspection is: No fee for the inspection  *The Arizona Revised Statutes (A.R.S.) can be found on the internet: www.azleg.state.az.us/	nistrative Code* and/or:  nd/or:  R.S. § 12-510, except as provided in A.R.S. § 12-529  § 2462, the U.S. government must commence an action utes § 41-1001(21)  ArizonaRevisedStatutes.asp while the Arizona
Administrative Code (A.A.C.) can be found at <a href="https://www.azsos.gov/rules/arizona-administrative">https://www.azsos.gov/rules/arizona-administrative</a>	
While I have the right to refuse to sign this form, the OGCC representatives may sti	· ·
☐ I have read this notice and discussed any questions or concerns with the OGCC	representatives and I have received the Small
Business Bill of Rights	
	Enter a date.
Signature of Regulated Person or Authorized On-Site Representative	
Signature of Regulated Person or Authorized On-Site Representative	
☐ The regulated person or authorized on-site representative refused to sign.	
Name of Regulated Person or Authorized On-Site Representative Title	
The regulated person or an authorized on-site representative was not present at the	8/28/2018
Signature of OGCC Representative	

- Inspection regular interviews.

  ☐ I understand that I can accompany the OGCC representative(s) on the premises, except during confidential interviews.

  ☐ I understand that I have right to, on request:

  ➤ Copies of any original documents taken during the inspection, and that the OGCC will provide copies of those documents at the OGCC's expense;

  ➤ A split of any samples taken during the inspection, if the split of the samples would not prohibit an analysis from being conducted or render an analysis inconclusive;

  ➤ Copies of any analysis performed on samples taken during the inspection and that the OGCC would provide copies of this analysis at the OGCC's expense;

  ➤ Copies of any documents to be relied on to determine compliance with licensure or regulatory requirements if the agency is otherwise permitted by law to do so.

  ☐ I also understand that:

  Each person who is interviewed by the OGCC inspector during the inspection must be informed that:

  ➤ Participation in an interview is voluntary, unless legally compelled to participate;
  - They have the right to have an attorney or other experts in their field present during the interview to represent or advise the regulated person;
  - The OGCC inspector may not take any adverse action or treat less favorably or draw any inference as a result of the regulated person's decision to be represented by an attorney or advised by any other experts in their field;
  - Statements made by the person may be included in the inspection report; and
  - They have the right to 24 hours to review and revise any written witness statement drafted by the OGCC inspector on which the OGCC inspector requests that person's signature.
  - > If the information and documents provided to the OGCC inspector become a public record, trade secrets and proprietary and confidential information may be redacted, unless the information and documents are not confidential pursuant to statute.
  - Each person interviewed during the inspection must be informed that statements made by the person may be included in the inspection report;
  - Each person whose conversation is tape recorded during the inspection must be informed that the conversation is being tape recorded;
  - If an administrative order is issued or a permit decision is made based on the results of the inspection, I have the right to appeal that administrative order or permit decision. I understand that my administrative hearing rights are set forth in Arizona Revised Statutes § 41-1092 et seq. and my rights relating to an appeal of a final agency decision are found in Arizona Revised Statutes § 12-901 et seq.
  - If I have any questions or concerns about this inspection, I may contact the person listed as the ADEQ Follow-up Contact on the front of this form; ADEQ's Ombudsman at (602) 771-4322 (toll free inside Arizona at (800) 234-5677, extension, 771-4322); or the Arizona Ombudsman-Citizens' Aid office at (602) 277-7292 (toll free at (800) 872-2879);

If I have any questions concerning my rights to appeal an administrative order or permit decision, I may contact the OGCC's Administrative Counsel at (602) 542-8553.

## Oil and Gas Field Inspection Photograph Log

Site Location:NE cor. Cotton Lane and IndianPhotographer:Camera:Copper Eagle 1-24School Rd., Phoenix, AZDennis TurnerCanon PowerShot 110SX

Copper Eagle 1-24 School Rd., Phoenix, AZ Dennis Turner Canon Power

Photo No. Date:
8/28/2018

**Direction Photo Taken:** 

Southeast

**Photo Description:** 

ID of wellhead



Photo No. Date: 8/28/2018

**Direction Photo Taken:** 

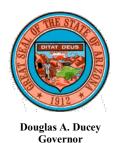
Southeast

**Photo Description:** 

View of cement bond log tool



Form updated 11/2017 Page 1



#### State of Arizona

#### **Oil and Gas Conservation Commission**

1110 W. Washington Street, Phoenix, AZ 85007 602-771-4501 www.azogcc.az.gov

Dennis L. Turner, Oil and Gas Administrator

Commissioners: Frank Thorwald, Chair Vice Chair, vacant Stephen R. Cooper William C. Feyerabend J. Dale Nations, Ph.D.

#### VIA EMAIL and US MAIL

January 31, 2018

Mr. Bob Bambauer Senior Vice President Sunbelt Holdings 6720 North Scottsdale Road, Suite 250 Scottsdale, AZ 85253-4424

RE: Plugging and Abandonment of Copper Eagle #1-19 (permit 911) and Copper Eagle #1-24 (permit 909)

Dear Mr. Bambauer:

The Arizona Oil and Gas Conservation Commission (OGCC or Commission) appreciates your time and input at the public meeting on January 12, 2018. As you recall, the OGCC discussed the matter of plugging and abandonment (P&A) of the two wells: Copper Eagle #1-19 (permit 911) and Copper Eagle #1-24 (permit 909). The P&A application that Southwest Groundwater Consultants submitted via email on November 16, 2017 does not meet the minimum requirements of Arizona Administrative Code (A.A.C.) R12-7-127(C) through R12-7-127(F).

At the January 12, 2018 meeting, the Commission approved the following procedures to plug and abandon the two referenced wells:

- 1. Sunbelt Holdings shall comply with A.A.C. R12-7-127(C)(3) to ensure that no annular space in each well extends from above the top of salt to the surface through any casing string. To document this condition to the satisfaction of the Commission, the recommended method is either to run a cement bond log, or a casing integrity log. Cement and casing integrity may be determined with existing or new cement bond logs or other evidence that the well is sealed from the surrounding formations and aquifers and from the Luke salt body below.
- 2. Place a cast iron bridge plug (CIBP) in each well at the approximate top of the salt body. The Commission recommended the CIBP be placed at a minimum depth of 2100 feet in both wells.
- 3. Below the CIBP, the entire wellbore shall be filled with plugging mud at the minimum weight specified in R12-7-127(D). Above the CIBP, the entire wellbore shall be filled with plugging cement to the surface. The preferred plugging cement slurry is that recommended by the American Petroleum Institute (API) Environmental Guidance Document: Well Abandonment and Inactive Well Practices for U.S. Exploration and Production Operations, i.e., a neat cement slurry mixed to API standards. The plugging cement slurry shall be allowed to cure for the times specified by API before proceeding with excavation work.
- 4. Remove the upper ten (10) feet of all well casing materials and all surface structures and install a heavy metal plate over all tubulars. The well location and identity shall be permanently inscribed on the plate as required in A.A.C. R12-7-106(A).

Mr. Bambauer p. 2

5. The excavated portion around well shall be backfilled first with three (3) to five (5) feet of granular material, liberally infused with bright colored, highly visible and permanent dye.

- 6. Over this layer, place clean imported fill material, compacted with wheel and bucket tamping.
- 7. The installation of a permanent above-ground well marker, pursuant to A.A.C. R12-7-127(F), is waived. Upon completion of placement of the five (5) feet of clean imported fill as cited in item 7 above, the ground surface shall be returned to its current condition.
- 8. The site shall be surveyed by a surveyor licensed in the state of Arizona, which shall include geodetic coordinates. The location shall be surveyed before the site is backfilled with the specified materials.
- 9. A temporary marker, the same or similar to that currently at the site, shall be placed above ground at the location of the well after all work is completed.
- 10. Photo-document the above required closure steps to confirm completion of the plug and abandonment of the wells to statute and rule.
- 11. The Application to Plug and Abandon, Attachment A, is hereby incorporated by reference as to Details of Proposed Plan of Work that are in agreement with the above stated conditions. The conditions as noted above control where there is any disagreement with Attachment A.

For existing well log interpretation to satisfy the requirements in 1. above, the Commission notes that Schlumberger provided a large portion of the electric downhole logs of record for the two wells and may be a good source for help with data interpretation. Additionally, the Commission recommends that Sunbelt review the OGCC well files for the two subject wells for logs available.

The Commission strongly recommends the use of drilling contractors experienced in the oilfield services with workovers and plugging and abandonment work. If additional cement work must be performed on either well, the commission suggests use of an oil field service contractor that is equipped to perform the additional cement work behind casing. If you require a list of suggested experienced contractors in this area, the Commission recommends that you contact the Interstate Oil and Gas Compact Commission, 405/522-8380 or communications@iogcc.ok.gov.

Please advise me via phone or email at least 48 hours in advance of the work commencing on each well. When the plugging work is completed on each well, in accordance with R12-7-127(I), submit a completed Form 10 within 15 days. Download this form at http://www.azogcc.az.gov/forms.

Please direct any questions and address all correspondence to:

Dennis L. Turner
Oil & Gas Administrator
Arizona Oil & Gas Conservation Commission
c/o Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, AZ 85007
ogcc@azdeq.gov

Sincerely,

Dennis L. Turner

Oil & Gas Program Administrator

Dennis C. Tonne

cc: Frank Thorwald, Chairman, Arizona Oil and Gas Conservation Commission (email only)
Kevin Hebert, Southwest Groundwater Consultants

## APPLICATION TO PLUG AND ABANDON

FIELD Luke - Goodye	ar, Arizona					
OPERATOR Formerly S	SunCor	A[	DRESS & PHONE	N/A		
LEASE NUMBER (Lessor's n	name if fee) N/	A		WELL NO.	SunCor 1-24	
LOCATION Cadastral	Well Location -	B(2-2) 24 CCC	,			
					0.050.0	
TYPE OF WELL Oil and	Gas Storage We			TOTAL DE	PTH 6,053 ft	
ALLOWARIE (If Assigned)	N/A	Oil, Gas, or Dry)				
ALLOWABLE (If Assigned) LAST PRODUCTION TEST		V/A	(Bbls.)	WATER	N/A	(Bbls.)
ZAOT THODOCHON TEOT		N/A	(MCF)	DATE OF TE	et N/A	(====,
PRODUCING HORIZON _	N/A		DUCING FROM	N/A	TO N/A	
1 COMPLETE CASING DEC	CORD.					
1. COMPLETE CASING REC						
<ul> <li>Conductor Pipe</li> <li>24" pipe</li> </ul>						
Surface Casing		)				
- 13 3/8" p	oipe					
<ul> <li>Production Cas</li> <li>9 5/8" pij</li> </ul>		0π)				
о оло <sub>(</sub> р.)						
2. FULL DETAILS OF PROP	OSED PLAN OF W	ORK:				
See Attachme	ent A					
DATE COMMENCING OPER	ATIONS Nov	rember/Decembe	r 2017			
NAME OF PERSON DOING	WORK Southwest	Waterworks Confr	actors, Inc. ADDR	ESS 2205 W. Gr	ant Street, Phoenix	AZ 85005
		Me	1 whit			
		Signature	0 + 11.	A. S. J. S. A.		
		Title	or project by	drogeologist et, Ste. 120,	0/1-0-11-0	16430
Mail two copies of completed for Oil and Gas Program Administrator	orm to:		, 44th Street	et, 5te. 120,	PHOEN X, AZ	85018
Arizona Department of Environment 1110 W. Washington Street	tal Quality	Address	3/17			
Phoenix, AZ 85007		Date				
Data Approved				STATE OF A	RIZONA	
Date Approved STATE	E OF ARIZONA		OIL & C		TON COMMISSION	N
OIL & GAS CONS	· · · · · <del>-</del> · · · ·	MISSION		Application to Plug a		
Ву			Form No. 9	FIIE TWO CO	ртөэ	
10						12/2016

Permit No.



**Details of Proposed Plan of Work** 



## Details of Proposed Plan of Work

- Measure and record depth to groundwater.
- Install bridge plug, consisting of a rubber packer or similar, at least 60 feet into well.
- Confirm depth of bridge plug by tagging with a weighted measuring tape.
- Once bridge plug is confirmed to be at appropriate depth, a cement slurry, consisting of two (2) 94 lb sacks of Portland Type II cement, will be placed into the well using a centralized tremie pipe.
- Allow cement to set for a minimum of one hour.
- · Tag surface of the plug to confirm placement.
- An additional cement mixture, consisting of two (2) 94 lb sacks of Portland Type II cement,
   will be placed in the well using a centralized tremie pipe.
- The second lift of the bridge plug will be allowed to cure for period of at least 8 hours.
- Place a final cement slurry from the top of the plug to a depth of within 10 feet of the surface.
- Remove the upper 10 feet of all well casing materials and all surface structures.
  - Excavate trench box to sufficient depth to facilitate removal of top 10-feet of casing materials.
  - Excavated portion around well will be backfilled and compacted with wheel and bucket tamping using clean imported fill material.
- Because future development of the site is proposed, it is requested that the requirement to install a permanent well marker be waived. A GPS measurement of the well location is proposed instead.

			PLUG	SINC	RE	CORD				
Operator	erly Copper Eagle Gas	Storage LLC			Addre Not Ap	ss & Phone	numbe	<b>?</b> r		д-2004 д. 49 4 год и у госторов 4 год Асторич Сорошин Анализии и селе сположения и селе подости и селе сположения и селе спорожения и селе сположения и сел
<del></del>	Federal, State, or Indian Lease No. or lessor's name if fee lease						ell No. Field & Reservoir			
Location of Well	tion: B (2-1) 19 A	AB	· · · · · · · · · · · · · · · · · · ·				Sec -	Twp - Rge		County Maricopa
Application to dri		Has this well ever produced oil or ga No		1 (	cter of well a bil (bbls/day Applical	') i	oletion (initial Gas (Mo Not Applicat	CF/day)	Dry?	
Date plugged May 7, 20	18		Total depth 2.100 feet	-	Amoun	t well produ	icing w	hen plugged Gas (M	ICF/day)	Water (bbis/day)
Name of each for oil or gas. Indica	rmation containing te which formation at time of plugging	Fluid conte	nt of each formation			Application of e		Not Applica	Size, kind & Indicate zon	depth of plugs used. es squeeze cemented, nt of cement
Not Ap	pplicable									
							····	,		
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		<del> </del>								The second section of the section of the second section of the section of the second section of the second section of the se
					1	• · · · · · · · · · · · · · · · · · · ·				
			CAS	ING	RECOF	D	•			
Size pipe	Put in well (ft.)	Pulled out	(ft.) Left in well	(ft.)	method	epth and of parting (shot, etc.)	of parting		Packers and shoes	
20"	60'	10'	50'							
13 3/8"	2,000'		1,990'							
9 5/8"	5,650'		5,540	)'	<u> </u>	~~~		-		
					ļ			~~~		
	ed with heavy drilling	mud, accord	ling to regulations?		Indica	e deepest f	formatio	on containing	fresh water	
Well was cemented	from 10' to 2,100 feet NAME AND ADDI	RESSES OF	F ADJACENT LE	ASE (	OPERA	TORS OR	OWN	ERS OF TH	IF SURFACE	desemperatura esta esta porta de la composição de la comp
Name		Addre	<del> </del>		O 1 12 10 1			<del></del>	from this well	
**************************************	None		<del></del>							
						***************************************				`
				WARLES AND THE STATE OF			riggeneyêşîdi saldının germe			
operations to bas	er information require se of fresh water san g completion of this v	d, perforated	interval to fresh wa	ter sa	nd, name	and addre	ss of s	urface owner	, and attach le	etter from surface
	· · · · · · · · · · · · · · · · · · ·		Not	t App	olicable	<del></del>				
Use reverse sid	le for additional de	tail	nt Paramatalan maranan di Palakia di Santa Santa Papa di Parada ang Papa di Palakia Ang Palakia di Santa Ang P Santa Santa Sa			<del></del>			<del></del>	
CERTIFICATE: I Southwest Ground	, the undersigned, ur water Consultants	nder the pena			-				y to make this	of the
	red under my superv	ision and dire	ection and that the f	facts s	tated the	1 /	1.		lete to the bes	st of my knowledge.
5-/6 Date	, - 18			•	<u>-</u> s	Ullu-       ignature	WW.	A	No and the state of the state o	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Mailana	***************************************	-lated form to			rije, je nazan kan kan saka da Sabaki	2	TATE OF	ARIZONA	**************************************
	Oil and G Arizona D 1110 W. V	Sas Program A Department of Washington St	Environmental Quali	ity		OIL & G			ATION COI	MMISSION
Phoenix, AZ 85007  Permit No. email one copy to: ogcc@azdeq.gov						File lo. 10	e two c	opies: one b	oy mail, one el	ectronically



K - WEST SURVEYING, INC. P.O. BOX 509 AVONDALE, AZ 85323 PHONE: 623-536-8248 FAX: 623-536-8247

CELL: 602-320-2333

E-MAIL: kwestsurvey@cox.net

April 05, 2018

Southwest Groundwater Consultants

Attn.: Kevin Hebert

Re: Monitoring Well # 1-19

South side Camelback Rd. and West of

Reems Rd. (alignment North)

The following is Arizona State Plane coordinates of monitoring well #1-19, lying within the NE.1/4, Sec. 19, T.-2N., R-1W. of the G. & S.R.B. & M., Maricopa County, Arizona:

N. 912398.015 E. 553876.879

Basis of Coordinates (NAD83 DATUM):
Points #30671-1 & #30672-1, PLSS SUBDIVISION RECORD OF SURVEY GDACS,
Recorded in Book 688 of Maps, Page 40, records of Maricopa County, Arizona.

Any questions regarding this matter, please contact K-West Surveying at the above information.

Wade H. Shaffer R.L.S.

vice-president

### **EXHIBIT A**

## INJECTION WELL 1-19

A PORTION OF THE NORTHEAST QUARTER OF SECTION 19, TOWNSHIP 2 NORTH, RANGE I WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT FROM WHICH THE NORTHEAST CORNER OF SAID SECTION 19 BEARS NORTH 00°03' 07" EAST, A DISTANCE OF 320.00 FEET AND SOUTH 89°56' 53" EAST, A DISTANCE OF 1099.47 FEET; THENCE SOUTH 00°03' 07" WEST, A DISTANCE OF 120.00 FEET; THENCE NORTH 89°56' 53" WEST, A DISTANCE OF 60.00 FEET; THENCE NORTH 00°03' 07" EAST, A DISTANCE OF 120.00 FEET; THENCE SOUTH 89°56' 53" EAST, A DISTANCE OF 60.00 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 7,200 SQUARE FEET OR 0.165 ACRES, MORE OR LESS.



# State of Arizona

# Oil and Gas Conservation Commission

1110 W. Washington Street, Phoenix, AZ 85007 602-771-4501 www.azogcc.az.gov Dennis L. Turner, Oil and Gas Administrator Commissioners:
Frank Thorwald, Chair
J. Dale Nations, Ph.D., Vice Chair
Stephen R. Cooper
William C. Feyerabend

#### VIA EMAIL and US MAIL

August 17, 2018

Mr. Bob Bambauer Senior Vice President Sunbelt Holdings 6720 North Scottsdale Road, Suite 250 Scottsdale, AZ 85253-4424

RE:

Notice of Arizona Oil & Gas Conservation Commission Ruling, Meeting of July 13, 2018: Requirement to record GPS coordinates of the Copper Eagle #1-19 (permit 911) well with the Maricopa County Reorder

Dear Mr. Bambauer:

## **Determination by the Commission**

At the properly noticed Arizona Oil & Gas Conservation Commission (AOGCC) meeting on July 13, 2018, the Commission addressed the matter of recording the GPS coordinates of the subsurface marker for the Copper Eagle #1-19 well (permit 911), which was plugged and abandoned on May 7, 2018.

After discussion of the item, the AOGCC voted to require SunBelt Holdings to record the cover plate location of the wellhead with the Maricopa County Recorder. According to the "SunCor 1-19 Abandonment Report," the top of the wellhead is approximately ten feet below ground surface.

SunBelt Holdings shall provide the Maricopa County Recorder's office with a copy of the final plugging report, dated May 16, 2018 and shall record with the County the GPS coordinates of the subsurface location of the wellhead.

This task should be completed on or before November 30, 2018. Please contact the undersigned if you believe more time is necessary.

Please direct any questions and address all correspondence to:

Dennis L. Turner
Oil & Gas Administrator
Arizona Oil & Gas Conservation Commission
c/o Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, AZ 85007
ogcc@azdeq.gov

Sincerely,

Dennis L. Turner

Oil & Gas Program Administrator

Demus L. Turn

cc:

Frank Thorwald, Chairman, Arizona Oil and Gas Conservation Commission (email only)

Kevin Hebert, Southwest Groundwater Consultants



May 16, 2018

Mr. Bob Bambauer Senior Vice President Sunbelt Holdings 6720 North Scottsdale Road, Suite 250 Scottsdale, Arizona 85253

SUBJECT: WELL ABANDONMENT – SUNCOR 1-19 OIL & GAS STORAGE WELL, GOODYEAR, AZ

Dear Mr. Bambauer:

Southwest Groundwater Consultants (SGC) has prepared the following report documenting the abandonment of the SunCor 1-19 Oil & Gas Storage Well located south of Camelback Road, approximately 1/4 mile east of Alsup Avenue in Goodyear, Arizona. The location of the well is shown in Figure 1 included as Attachment 1.

### BACKGROUND INFORMATION

Information regarding 1-19 Oil & Gas well is presented below.

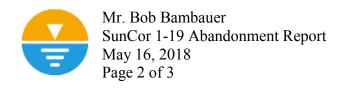
	SunCor 1-19
Cadastral Well Location	B (2-1) 19 AAB
Date Installed	July 2002
Total Depth (feet)	8,307

### **Abandonment Application**

SGC prepared a well abandonment application and submitted it to the Oil & Gas Conservation Commission for approval. Final approval was granted by the Oil & Gas Conservation Commission in a letter dated March 8, 2018. A copy of the "Application to Plug and Abandon" and the subsequent approval letter are included as Attachment 2.

### **Abandonment Procedures**

Southwest Waterworks Contractors, Inc. (Southwest Waterworks) was contracted to abandon the well. Southwest Waterworks contracted Longmire Well Service (Longmire) to conduct a downhole color video survey of the well on March 27, 2018 to confirm the well casing was open to a depth of at least 2,100 feet below land surface (bls). As shown in the video, the well casing was observed to be open below 2,106 feet bls. The well casing was observed to be in good condition and the water surface in the well was observed at 2 feet bls. A copy of the well video on CD is included as Attachment 3.



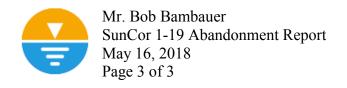
Longmire was also contracted to install a steel bridge plug in Well 1-19 at a depth of 2,100 feet bls. Longmire installed a custom made corrugated steel plug that had a diameter slightly less than the existing 9 5/8-inch diameter well casing. The plug was swaged in place on April 13, 2018. Photographs of the bridge plug are included in Attachment 4.

Although a cement bond log had previously been conducted on the 1-19 well on August 5, 2002 by Schlumberger, it was determined the log only pertained to the cased portion of the well below 2,106 feet. In order to confirm no annular space was "open" to the surface behind the well casing, SGC contracted Geolog, LLC (Geolog) to perform a cement bond log from the depth of 2,100 feet bls to the ground surface. Geolog conducted a cement bond log of well 1-19 on April 18, 2018. The cement bond log performed by Geolog confirmed the annular space behind the casing was cemented. A copy of the cement bond log conducted by Geolog is included as Attachment 5.

Well 1-19 well was abandoned by filling with a cement bentonite slurry in two lifts by pumping through a tremie pipe. Prior to pumping the cement grout through the tremie pipe, the cement grout was passed through a 2-inch slotted bar strainer, in order to remove any unmixed lumps. Approximately 10 cubic yards of cement bentonite slurry were placed during the initial lift on May 2, 2018 followed by a second lift of approximately 23 cubic yards on May 7, 2018. The second lift brought the cement in the well to within approximately 10 feet of ground surface.

Final abandonment activities included removing the upper 10 feet of well casing materials; placing a permanent steel plate with the well name permanently engraved over the remaining casing materials; placing a granular material infused with a bright colored permanent dye; and backfilling the remaining portion of the excavation with clean imported fill material. The fill material was compacted using a hand operated vibrating compactor, bucket tamping, and wheel rolling. A sign post, with pertinent well information, was placed at the abandoned well location; although it is understood the need for a permanent marker post was waived by the Oil & Gas Conservation Commission and this sign may be removed pending future development of the property. Photographs documenting the abandonment procedures are included as Attachment 4.

The well location was previously surveyed by an Arizona Licensed surveyor. A copy of the survey information is included as Attachment 6. A completed "Plugging Record" was prepared for the abandonment and is included as Attachment 7.



If you have any questions or require additional information, please call.

Sincerely,

**Southwest Groundwater Consultants** 

Kevin D. Hebert, R.G.

Senior Project Hydrogeologist

Attachments: Attachment 1: Figure 1

Attachment 2: Application to Plug an Abandon

Attachment 3: Well Video

Attachment 4: Abandonment Photographs

Attachment 5: Cement Bond Log

Attachment 6: Well Coordinate Survey

Attachment 7: Plugging Record

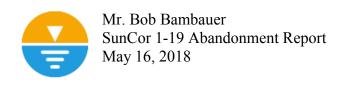


FIGURE 1





May 15, 2018

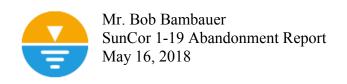
Project B.2430

WELL LOCATION MAP SUNCOR 1-19 OIL & GAS WELL

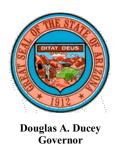
Maricopa County, Arizona

Figure

1



## APPLICATION TO PLUG AND ABANDON



## State of Arizona

#### **Oil and Gas Conservation Commission**

1110 W. Washington Street, Phoenix, AZ 85007 602-771-4501 www.azogcc.az.gov

Dennis L. Turner, Oil and Gas Administrator

Commissioners: Frank Thorwald, Chair Vice Chair, vacant Stephen R. Cooper William C. Feyerabend J. Dale Nations, Ph.D.

#### VIA EMAIL and US MAIL

March 8, 2018

Mr. Bob Bambauer Senior Vice President Sunbelt Holdings 6720 North Scottsdale Road, Suite 250 Scottsdale, AZ 85253-4424

RE: Arizona Oil and Gas Conservation Commission Reconsideration of Approval of the Sunbelt Holdings Plug and Abandonment of the Copper Eagle #1-19 (permit 911) and Copper Eagle #1-24 (permit 909) Wells at the Meeting of January 12, 2018

Dear Mr. Bambauer:

As you may recall, the Arizona Oil and Gas Conservation Commission (OGCC or Commission) approved the plug and abandonment process for Sunbelt Holdings (Sunbelt) for wells Copper Eagle #1-19 (permit 911) and Copper Eagle #1-24 (permit 909) in the meeting of January 12, 2018. Sunbelt requested modification of the Commission's ruling and clarification of the Dennis Turner follow up letter of January 31, 2018. The Commission properly noticed the Sunbelt request for modification of the previous order, which was brought forward at the Commission meeting of February 23, 2018.

The Commission again appreciates your time and input at the public meeting on February 23, 2018 to reconsider two of the Commission's eleven directives as approved in the January 12, 2018 meeting. The directives were described in my letter of January 31, 2018.

At the February 23, 2018 meeting, the OGCC voted to amend two of the directives that were reflected in my previous letter. The two directives are modified as follows:

- Sunbelt Holdings shall install a permanent bridge plug at the approximate top of the salt body in each well. At Sunbelt's discretion, the bridge plug may be either cast iron or steel. The Commission recommended the bridge plug be placed at a minimum depth of 2100 feet in both wells.
- 3. In each well, below the permanent bridge plug, the borehole may remain filled with brine or water (its current state), instead of filling it with plugging mud, as required by Arizona Administrative Code (A.A.C.) R12-7-127(D).

Other than the two directives as modified above, the remaining directives are unchanged. In placing the permanent bridge plug, Sunbelt shall fill the entire wellbore with plugging cement to the surface. The preferred plugging cement slurry is that recommended by the American Petroleum Institute (API) Environmental Guidance Document: Well Abandonment and Inactive Well Practices for U.S. Exploration and Production Operations, i.e., a neat cement slurry mixed to API standards. The plugging cement slurry shall be allowed to cure for the times specified by API before proceeding with excavation work.

Mr. Bambauer p. 2

In the February 23, 2018 meeting, the OGCC also discussed the absence of any data verifying casing integrity and cement bonding in the 1-24 well. During this meeting, Sunbelt agreed to confer with Schlumberger, the logging company who originally ran the logs in both wells, to determine the best way to evaluate whether the cement bond and casing integrity are adequate for plugging the 1-24. Sunbelt agreed to provide the Commission with the results of that discussion with Schlumberger. The first directive of the Commission, as contained in my January 31, 2018 letter, remains unchanged; the Commission expects assurance from the operator that the 1-19 wellbore is isolated from the formations it penetrated above the Luke salt deposit.

Enclosed is your copy of the approved Application to Plug and Abandon the 1-19 well. Please advise me via email (preferred) or phone at least 48 hours in advance of the work commencing on this well. When the plugging work is completed on this well, in accordance with R12-7-127(I), submit a completed Form 10 within 15 days. Download this form at <a href="http://www.azogcc.az.gov/forms">http://www.azogcc.az.gov/forms</a> . Forms 9 and 10 should be submitted both electronically and via US Mail.

Please direct any questions and address all correspondence to:

Dennis L. Turner
Oil & Gas Administrator
Arizona Oil & Gas Conservation Commission
c/o Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, AZ 85007
ogcc@azdeq.gov

Sincerely,

CC:

Dennis L. Turner

Oil & Gas Program Administrator

Dennis L. Turner

Frank Thorwald, Chairman, Arizona Oil and Gas Conservation Commission (email only)

Kevin Hebert, Southwest Groundwater Consultants

FIELD Luke - Goodyear, OPERATOR Formerly Sun	Cor		ADDRESS & PHONE	N/A			
LEASE NUMBER (Lessor's name	e if fee)	N/A		WELL NO	Su	inCor 1-19	
LOCATION Cadastral We	Il Location	- B(2-1)	19 AAB	200			
TYPE OF WELL Oil and Ga	as Storage \	Vell		TOTAL D	DEPTH	8,307 ft	
ALLOWABLE (If Assigned)	N/A	(Oil, Gas,	or Dry)				
LAST PRODUCTION TEST	OIL	N/A	(Bbls.)	WATER .	N/A		(Bbls.)
	GAS	N/A	(MCF)	DATE OF T	EST .	N/A	
PRODUCING HORIZON N/	A		_ PRODUCING FROM _	N/A	_ то	N/A	
1. COMPLETE CASING RECO	RD:						
<ul> <li>Production Casing</li> </ul>	5" Wall Gra 0 ft to 2,000 00 #/ft K-5 g (0 ft to 5,0	de B Line ) ft) 5, HC, ER 650 ft)	Pipe RW, BTC (New, API, Prim (New, API, Prime)	ne)			

See Attachment A

DATE COMMENCING OPERATIONS Ma	arch 2018
NAME OF PERSON DOING WORK South	vest Waterworks Contractors, Inc. ADDRESS 2205 W. Grant Street, Phoenix, AZ 85005
Mail two copies of completed form to: Oil and Gas Program Administrator Arizona Department of Environmental Quality 1110 W. Washington Street Phoenix, AZ 85007	Signature SENIOR PRIECT LLYDROGEOLOGIST  Title 3033 N. 44th Street, Str. 120, PLIVENIX, DZ 85018  Address  2/26/18  Date
Date Approved 3/8/2018 STATE OF ARIZON OIL & GAS CONSERVATION CO	Application to Divis and Abandon

Form No. 9

Permit No. 9//

12/2016



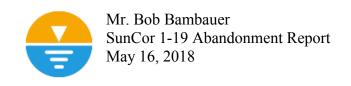
**Details of Proposed Plan of Work** 



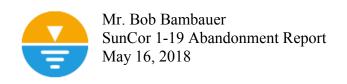
## Details of Proposed Plan of Work for 1-19 Abandonment

- 1. Install a steel bridge plug, swaged in place to a depth of 2,100 feet below land surface (bls).
- 2. Fill the entire cased interval from above the steel bridge plug to within 10-feet bls with a cement slurry mixed to American Petroleum Institute (API) Standards.
- 3. Remove the upper 10-feet of all well casing materials and surface structures at the well site.
  - 3.1. Install a metal plate over all casing tubulars at well site.
  - 3.2. In accordance with A.A.C. R12-7-106(A), permanently inscribe the well location and identification on the well plate.
- 4. Backfill the next three to five-feet of the excavation at the well with a granular material infused with a permanent, highly visible dye.
- Backfill the remaining excavation above the dyed granular material with clean imported fill and compact using wheel and bucket tamping.
- No permanent above-ground well marker will be installed due to A.A.C. R12-7-127(F) being waived. Ground surface will be returned to current condition.
- The well location will be surveyed using geodetic coordinates by an Arizona licensed professional surveyor.
- 8. After completion of work, a temporary marker will be placed above ground at the well location.

  The marker will be the same or similar to the marker currently on site.
- All closure steps will be photo-documented to confirm completion of the plug and abandonment of the well as per all applicable statutes and rules.



WELL VIDEO (ON CD)



ABANDONMENT PHOTOGRAPHS





View of bridge plug and swage tool

View of bridge plug



View of Longmire rig



View of bridge plug



Pumping cement bentonite slurry into 1-19 well



Site excavation to expose 1-19 well casing



View of excavation with upper casing removed



View of steel well marker

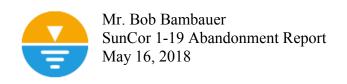




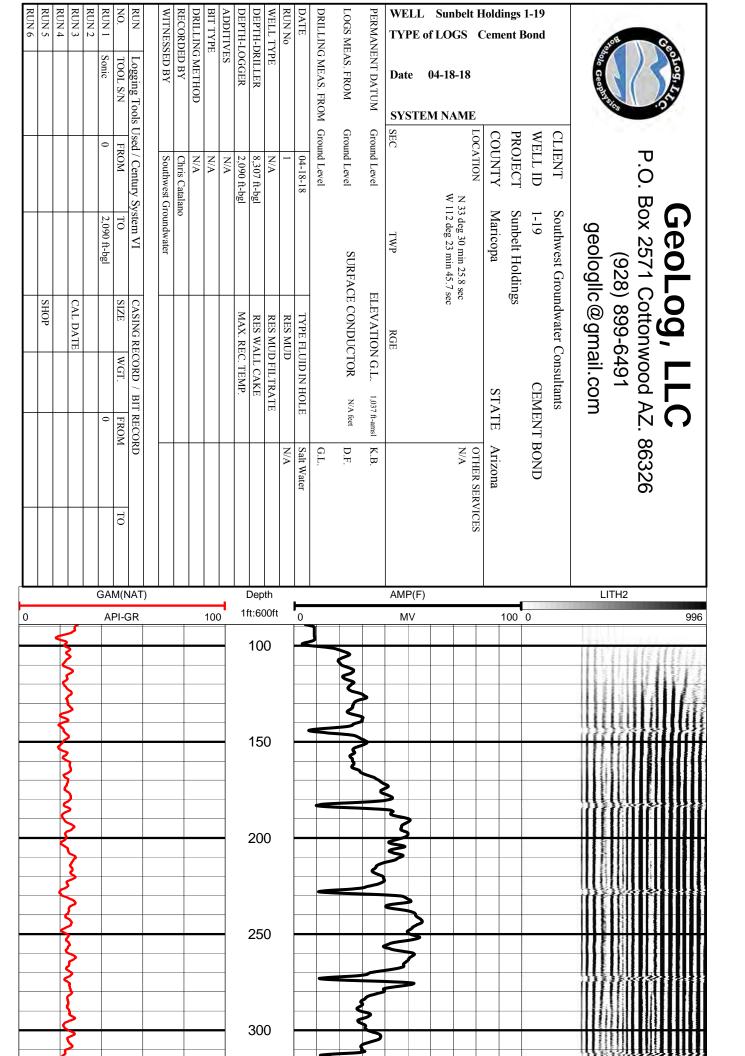
View of temporary sign post

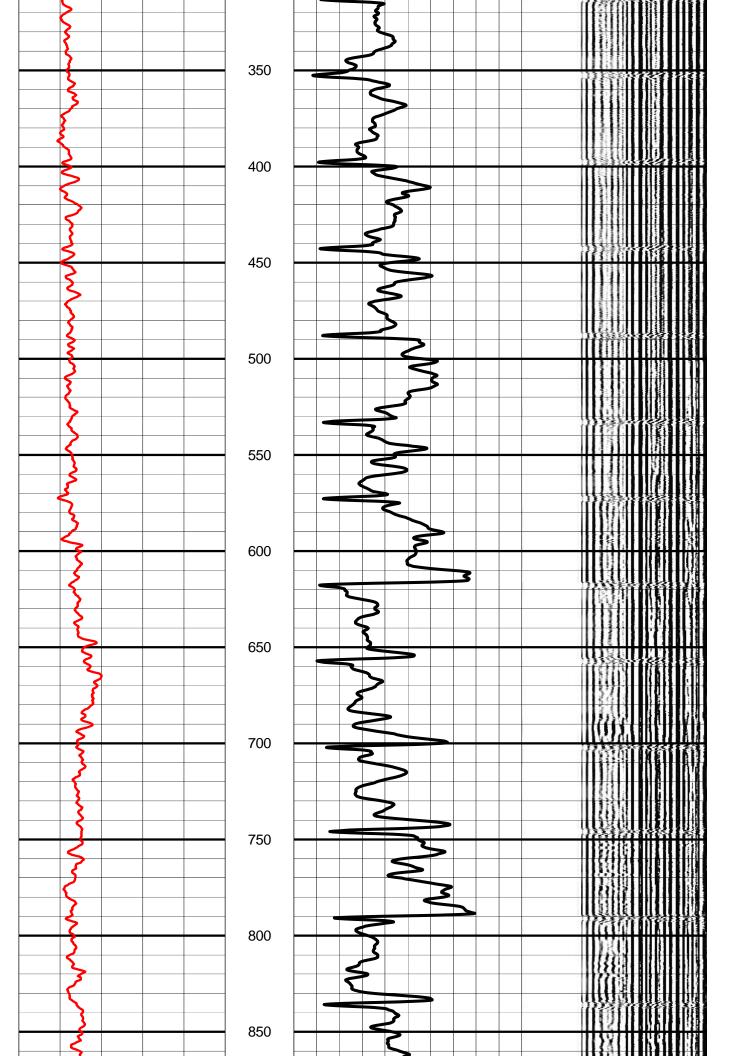


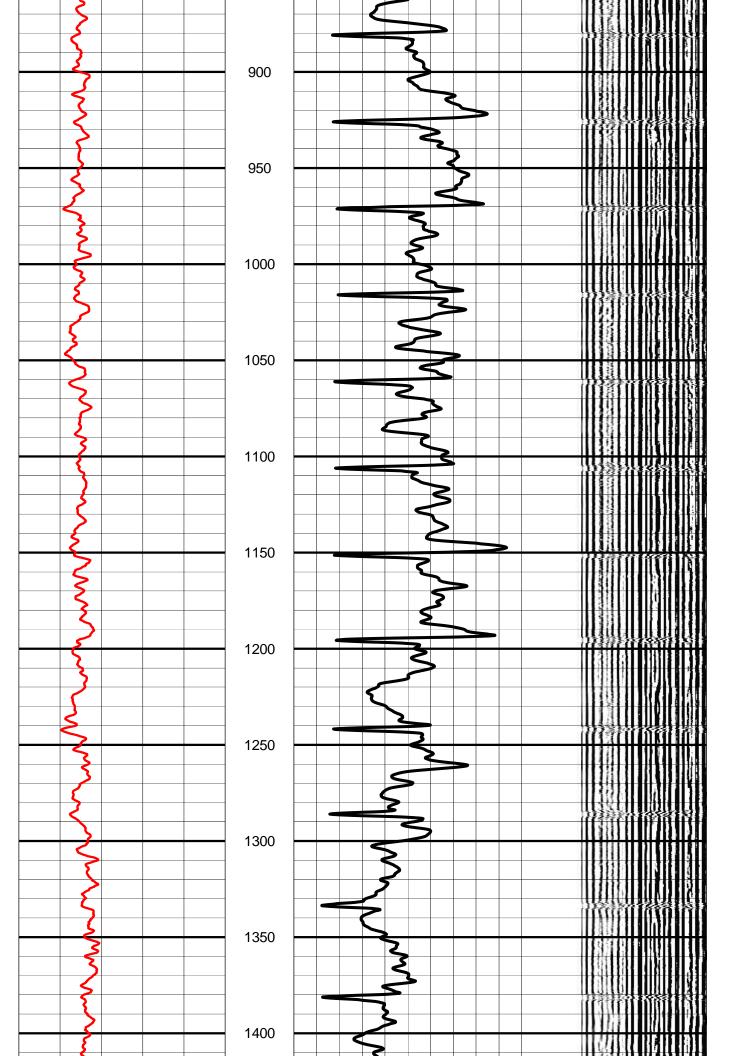
View of final site completion

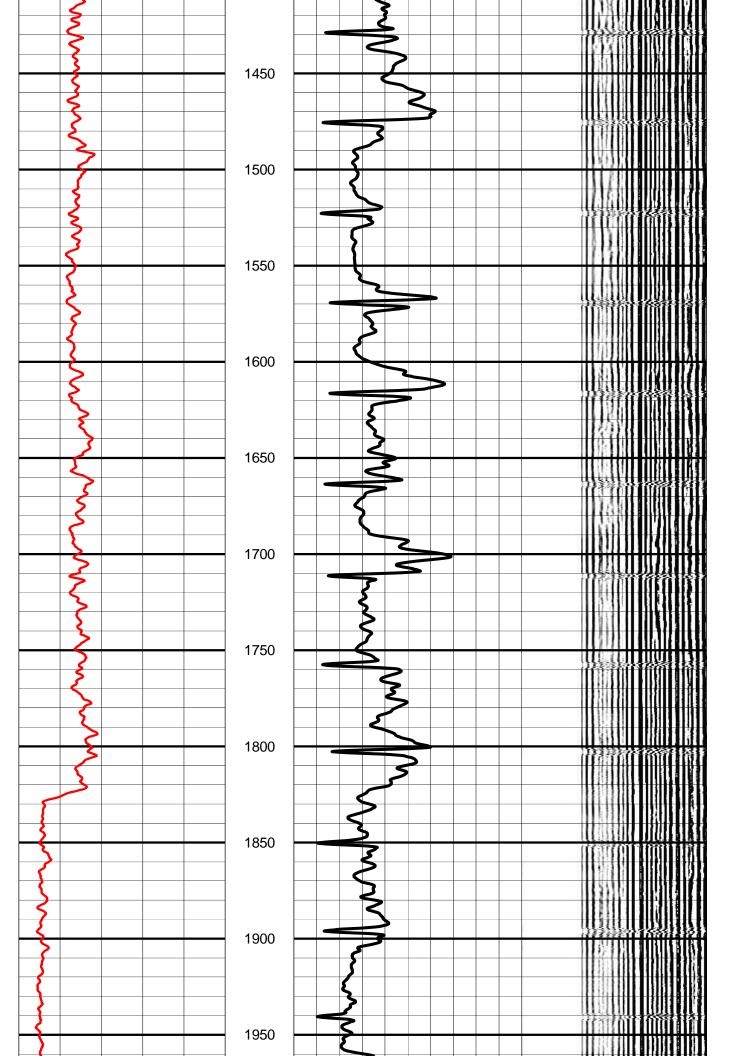


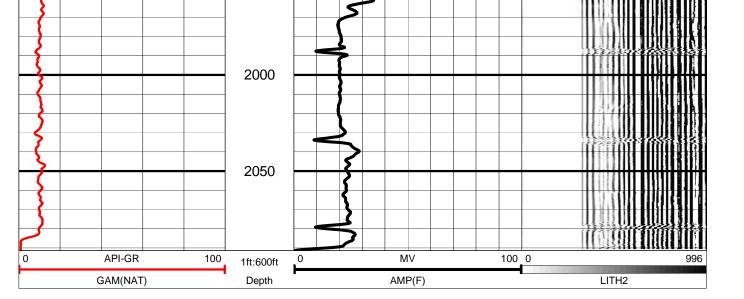
**CEMENT BOND LOG** 

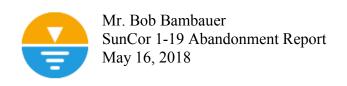




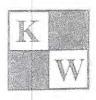








## WELL COORDINATE SURVEY



K – WEST SURVEYING, INC. P.O. BOX 509 AVONDALE, AZ 85323 PHONE: 623-536-8248 FAX: 623-536-8247 CELL: 602-320-2333 E-MAIL: kwestsurvey@cox.net

April 05, 2018

Southwest Groundwater Consultants

Attn.: Kevin Hebert

Re: Monitoring Well # 1-19

South side Camelback Rd. and West of

Reems Rd. (alignment North)

The following is Arizona State Plane coordinates of monitoring well #1-19, lying within the NE.1/4, Sec. 19, T.-2N., R-1W. of the G. & S.R.B. & M., Maricopa County, Arizona:

N. 912398.015 E. 553876.879

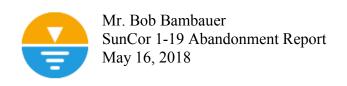
Basis of Coordinates (NAD83 DATUM):
Points #30671-1 & #30672-1, PLSS SUBDIVISION RECORD OF SURVEY GDACS,

Recorded in Book 688 of Maps, Page 40, records of Maricopa County, Arizona.

Any questions regarding this matter, please contact K-West Surveying at the above information.

Wade H. Shaffer R.L.S.

vice-president



PLUGGING RECORD

			PLU	GGING	RE	CORD				
Operator	erly Copper Eagle Gas	Storage, LLC				ess & Phone	numb	er		
	r Indian Lease No. or		e if fee lease	W€ 1-19	ell No. Field & Reservoir					
Location of Well	tion: B (2-1) 19 A	AB					Sec-	Twp - Rge		County Maricopa
Application to dri	Application to drill this well was filed in name of Copper Eagle Gas Storage, LLC				(	cter of well of the control of the c	)	pletion (initia Gas (Mo Not Applical	CF/day)	Dry?
Date plugged May 7, 20	18		Total depth 2,100 fe	et	Amou		icing w	hen plugged	: ICF/day)	Water (bbls/day)
Name of each fo oil or gas. Indica	rmation containing te which formation at time of plugging	Fluid conte	nt of each form		+	interval of e			Size, kind & Indicate zor	depth of plugs used. nes squeeze cemented, unt of cement
Not A	oplicable									
				NACINIC AC	PECOI	20				
Size pipe	Put in well (ft.)	Pulled out		well (ft.)	1	epth and			Packers and s	hnes
Size pipe	Fut III Well (It.)	ruiled out	(ii.) Leit iii	well (it.)	metho	d of parting (shot, etc.)			achers and s	
20"	60'	10'	5	50'						
13 3/8"	2,000'		1,9	990'						
9 5/8"	5,650'		5,5	540'						
Was well fil	led with heavy drilling	mud accord	ding to regulation	ns?	Indica	te deepest t	formati	on containing	fresh water	
	from 10' to 2,100 feet									
Name	NAME AND ADD	RESSES O Addr		LEASE	OPERA	TORS OR	OVVN		IE SURFAC	
IVAINO	None	7,001					_	Birodioi	110111 11110 1101	
	None							+		
		-								
operations to bas	ner information require se of fresh water san g completion of this v	d, perforated	interval to fresh	n water sa	ınd, nam	e and addre	ess of s	urface owner	, and attach le	etter from surface
				Not Ap	plicabl	е				
Use reverse sid	de for additional de	tail								
Southwest Ground report was prepa	I, the undersigned, unwater Consultants ared under my superv		(ce	ompany) a	and that stated the	l am authori	zed by	said compar	-	of the s report; and that this st of my knowledge.
Permit No.	Oil and G Arizona I 1110 W.' Phoenix,	ias Program A Department of Washington S AZ 85007	Environmental C	Quality	Form 1	File	GAS (	CONSERV Plugging		MMISSION lectronically

## APPLICATION TO PLUG AND ABANDON

OPERATOR Formerly	SunCor		ADDRESS & PHONE	N/A	
LEASE NUMBER (Lessor's	name if fee)	N/A	ADDITION & THORE	WELL NO. S	SunCor 1-19
	Well Location	at his court would	9 AAB	WELL NO	
LOCATION	TTON LOCATION	. 5(2 1)	0710		
TYPE OF WELL Oil and	d Gas Storage	Well		TOTAL DEPTH	8,307 ft
		(Oil, Gas, or	Dry)		
ALLOWABLE (If Assigned)	N/A				
LAST PRODUCTION TEST	OIL	N/A	(Bbls.)	WATER N/A	(Bbls.)
	GAS	N/A	(MCF)	DATE OF TEST	N/A
PRODUCING HORIZON	N/A		PRODUCING FROM _	N/A TO	o N/A
1. COMPLETE CASING RE	CORD:				
<ul> <li>Conductor Pip</li> </ul>					
	.375" Wall Gra		Pipe		
Surface Casin				20	
			V, BTC (New, API, Prin	ne)	
Production Ca     S			lew, API, Prime)		
- 9 5/0 4	13.5 #/ILTIC F	- I TO L TO (IN	iew, Ari, Filine)		
2. FULL DETAILS OF PRO	POSED PLAN OF	WORK:			
See Attachme	nt A				
	Ms	arch 2018			
DATE COMMENCING OPE	RATIONS	2010			
NAME OF PERSON DOING	WORK South	west Waterwo	rks Contractors, Inc. ADDRE	SS 2205 W. Grant	Street, Phoenix, AZ 850
			les 1/wat		
		Signatu			
			senior priject	LLYDROGEOLO!	515T
Mail two conies of completed	form to	Title	AZZ NI 14th Stree	t, Str. 120, P	HENIX DZ 85
Mail two copies of completed Oil and Gas Program Administrato	r	Address		)	(Account ) No 03
Arizona Department of Environme 1110 W. Washington Street	ntal Quality	Address	2/26/18		
Phoenix, AZ 85007		Date	7-7-		
0 /	10.0			STATE OF ARIZ	ONA
Date Approved 5/2	2018		Ollac	AS CONSERVATION	
OIL & GAS CON	É OF ARIZON		OIL & G	Application to Plug and	
UIL & GAS CON	SERVATION CO	NOISSINING		File True series	

Form No. 9

Permit No. 9//

Application to Plug and Abandon File Two copies

# APPLICATION TO PLUG AND ABANDON

CTS'. 376 208
(DUPLICATE)
P. P. St.

FIELD Luke - Goodyea	r, Arizona			40 Et	75 DU 1-19
OPERATOR Formerly Su	ınCor		ADDRESS & PHONE	N/A	and the last of a
EASE NUMBER (Lessor's na	me if fee)	N/A		WELL NO.	SunCor 1-19
OCATION Cadastral V	Vell Location	- B(2-1) 1	19 AAB		
Oil and (	Gas Storage	\/\ell		0.20	<sub>-PTH</sub> 8,307 ft
YPE OF WELL Oil and C	ous otorage	(Oil, Gas, or	r Dry)	TOTAL DE	PTH
LLOWABLE (If Assigned)	N/A		**		
AST PRODUCTION TEST	OIL	N/A	(Bbls.)	WATER 1	N/A (Bbls.)
	GAS	N/A	(MCF)	DATE OF TE	ST N/A
RODUCING HORIZON	N/A		PRODUCING FROM	N/A	TO N/A
. COMPLETE CASING REC	ORD:				
Conductor Pipe	(0 ft to 60 ft)	)			
	75" Wall Gra		Pipe		
Surface Casing     12.2/8" 6"			A/ DTC /Now ADI Drie	>	
Production Casi			N, BTC (New, API, Prin	ne)	
			New, API, Prime)		
FULL DETAILS OF PROPO	SED PLAN OF	WORK:			
TOLE DETAILS OF THOSE	OLD I LAN OI	WOTIK.			
See Attachment	Α				
ATE COMMENCING OPERA	тюме Ма	arch 2018			
ATE COMMENCING OPERA		LOCK OF	AND THE PARTY	122200	3000
AME OF PERSON DOING W	ORK South	vest Waterwo	rks Contractors, Inc. ADDR	ESS 2205 W. G	Grant Street, Phoenix, AZ 850
			Me I chi		
		Signatu	SENIOR PRIECT	Hydrogeolog	int
Residence of the second		Title	110 51	+ 61	120 PHOENIX, AZ 850
Mail two copies of completed for Oil and Gas Program Administrator		Address	3033 N. 44th 27	reci, ste.	1,50° 1, 100011 145 830
Arizona Department of Environmenta 1110 W. Washington Street Phoenix, AZ 85007	I Quality	Address	2/26/18		
Phoenix, AZ 03007		Date			
		Duto			
Date Approved		Duto		STATE OF A	ARIZONA
Date ApprovedSTATE	OF ARIZONA		OIL & C	GAS CONSERVA	TION COMMISSION
		4	OIL & C		TION COMMISSION and Abandon

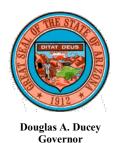


**Details of Proposed Plan of Work** 



## **Details of Proposed Plan of Work**

- Measure and record depth to groundwater.
- Install bridge plug, consisting of a rubber packer or similar, at least 60 feet into well.
- Confirm depth of bridge plug by tagging with a weighted measuring tape.
- Once bridge plug is confirmed to be at appropriate depth, a cement slurry, consisting of two (2) 94 lb sacks of Portland Type II cement, will be placed into the well using a centralized tremie pipe.
- Allow cement to set for a minimum of one hour.
- Tag surface of the plug to confirm placement.
- An additional cement mixture, consisting of two (2) 94 lb sacks of Portland Type II cement, will be placed in the well using a centralized tremie pipe.
- The second lift of the bridge plug will be allowed to cure for period of at least 8 hours.
- Place a final cement slurry from the top of the plug to a depth of within 10 feet of the surface.
- Remove the upper 10 feet of all well casing materials and all surface structures.
  - Excavate trench box to sufficient depth to facilitate removal of top 10-feet of casing materials.
  - Excavated portion around well will be backfilled and compacted with wheel and bucket tamping using clean imported fill material.
- Because future development of the site is proposed, it is requested that the requirement to install a permanent well marker be waived. A GPS measurement of the well location is proposed instead.



#### State of Arizona

#### **Oil and Gas Conservation Commission**

1110 W. Washington Street, Phoenix, AZ 85007 602-771-4501 www.azogcc.az.gov

Dennis L. Turner, Oil and Gas Administrator

Commissioners: Frank Thorwald, Chair Vice Chair, vacant Stephen R. Cooper William C. Feyerabend J. Dale Nations, Ph.D.

#### VIA EMAIL and US MAIL

January 31, 2018

Mr. Bob Bambauer Senior Vice President Sunbelt Holdings 6720 North Scottsdale Road, Suite 250 Scottsdale, AZ 85253-4424

RE: Plugging and Abandonment of Copper Eagle #1-19 (permit 911) and Copper Eagle #1-24 (permit 909)

Dear Mr. Bambauer:

The Arizona Oil and Gas Conservation Commission (OGCC or Commission) appreciates your time and input at the public meeting on January 12, 2018. As you recall, the OGCC discussed the matter of plugging and abandonment (P&A) of the two wells: Copper Eagle #1-19 (permit 911) and Copper Eagle #1-24 (permit 909). The P&A application that Southwest Groundwater Consultants submitted via email on November 16, 2017 does not meet the minimum requirements of Arizona Administrative Code (A.A.C.) R12-7-127(C) through R12-7-127(F).

At the January 12, 2018 meeting, the Commission approved the following procedures to plug and abandon the two referenced wells:

- 1. Sunbelt Holdings shall comply with A.A.C. R12-7-127(C)(3) to ensure that no annular space in each well extends from above the top of salt to the surface through any casing string. To document this condition to the satisfaction of the Commission, the recommended method is either to run a cement bond log, or a casing integrity log. Cement and casing integrity may be determined with existing or new cement bond logs or other evidence that the well is sealed from the surrounding formations and aquifers and from the Luke salt body below.
- 2. Place a cast iron bridge plug (CIBP) in each well at the approximate top of the salt body. The Commission recommended the CIBP be placed at a minimum depth of 2100 feet in both wells.
- 3. Below the CIBP, the entire wellbore shall be filled with plugging mud at the minimum weight specified in R12-7-127(D). Above the CIBP, the entire wellbore shall be filled with plugging cement to the surface. The preferred plugging cement slurry is that recommended by the American Petroleum Institute (API) Environmental Guidance Document: Well Abandonment and Inactive Well Practices for U.S. Exploration and Production Operations, i.e., a neat cement slurry mixed to API standards. The plugging cement slurry shall be allowed to cure for the times specified by API before proceeding with excavation work.
- 4. Remove the upper ten (10) feet of all well casing materials and all surface structures and install a heavy metal plate over all tubulars. The well location and identity shall be permanently inscribed on the plate as required in A.A.C. R12-7-106(A).

Mr. Bambauer p. 2

5. The excavated portion around well shall be backfilled first with three (3) to five (5) feet of granular material, liberally infused with bright colored, highly visible and permanent dye.

- 6. Over this layer, place clean imported fill material, compacted with wheel and bucket tamping.
- 7. The installation of a permanent above-ground well marker, pursuant to A.A.C. R12-7-127(F), is waived. Upon completion of placement of the five (5) feet of clean imported fill as cited in item 7 above, the ground surface shall be returned to its current condition.
- 8. The site shall be surveyed by a surveyor licensed in the state of Arizona, which shall include geodetic coordinates. The location shall be surveyed before the site is backfilled with the specified materials.
- 9. A temporary marker, the same or similar to that currently at the site, shall be placed above ground at the location of the well after all work is completed.
- 10. Photo-document the above required closure steps to confirm completion of the plug and abandonment of the wells to statute and rule.
- 11. The Application to Plug and Abandon, Attachment A, is hereby incorporated by reference as to Details of Proposed Plan of Work that are in agreement with the above stated conditions. The conditions as noted above control where there is any disagreement with Attachment A.

For existing well log interpretation to satisfy the requirements in 1. above, the Commission notes that Schlumberger provided a large portion of the electric downhole logs of record for the two wells and may be a good source for help with data interpretation. Additionally, the Commission recommends that Sunbelt review the OGCC well files for the two subject wells for logs available.

The Commission strongly recommends the use of drilling contractors experienced in the oilfield services with workovers and plugging and abandonment work. If additional cement work must be performed on either well, the commission suggests use of an oil field service contractor that is equipped to perform the additional cement work behind casing. If you require a list of suggested experienced contractors in this area, the Commission recommends that you contact the Interstate Oil and Gas Compact Commission, 405/522-8380 or communications@iogcc.ok.gov.

Please advise me via phone or email at least 48 hours in advance of the work commencing on each well. When the plugging work is completed on each well, in accordance with R12-7-127(I), submit a completed Form 10 within 15 days. Download this form at http://www.azogcc.az.gov/forms.

Please direct any questions and address all correspondence to:

Dennis L. Turner
Oil & Gas Administrator
Arizona Oil & Gas Conservation Commission
c/o Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, AZ 85007
ogcc@azdeq.gov

Sincerely,

Dennis L. Turner

Oil & Gas Program Administrator

Dennis C. Tonne

cc: Frank Thorwald, Chairman, Arizona Oil and Gas Conservation Commission (email only)
Kevin Hebert, Southwest Groundwater Consultants

COUNTY MARICOPA	A	REA LUKE SALT	LEASE N	O. FEE
		•		
WELL NAME COPPER EAGLE	GAS STORA	GE #1-19 SUNCOF	<u> </u>	
LOCATION NE NE	SEC 19	TWP 2 N RAN	IGE 1 W FOOTAGE 330	' FNL 1130" FEL
ELEV 1053' GR				
			TA 8	
CONTRACTOR NABORS DRILL				
CASING SIZE DEPTH	CEMENT	LINER SIZE &	DEPTH DRILLED BY	ROTARY YES
<u>30"</u> <u>75</u> '				CABLE TOOL NONE
<u>13 3/8"</u> <u>2106'</u>		**************************************	<del>'''''                                </del>	RESERVOIR N/A
9 5/8" 7463'	1673 sx		INITIAL PR	ODUCTION N/A
		SOURCE		
FORMATION TOPS	DEPTHS	L.L. E.L.	REMARKS	
				<u>,</u>
			<u> </u>	
The second secon	No. 10 Personal Property of the Control of the Cont			
			*	
ELECTRIC LOGS	PERFO	RATED INTERVALS	PROD. INTERVALS	SAMPLE LOG
)			THOS: INTERVALO	SAMPLE DESCRP.
				SAMPLE NO. <u>/897</u> CORE ANALYSIS
				DSTs
a.				
REMARKS STRATIGRAPHIC T	est Ch	ance owner a	f bund Oct '09	APP. TO PLUG
				PLUGGING REP.
<u> </u>		····		COMP. REPORT
WATER WELL ACCEPTED BY				
BOND CO. CONTINENTAL CA	SUALTY CO	Ciberty Mu	tual BOND NO. 930	237470 <i>024016685</i>
BOND AMT. \$ 10,000 25,00		CELLED	DATE JUNE 20	02 REPORT 10/31/2001
FILING RECEIPT 3115			WELL BOOK YES	
API NO. 02-013-20028			2002 DEDICATION	
	/ • -		202101111011	
PERMIT NUMBER 911				

(over)