

OIL AND GAS CONSERVATION COMMISSION

416 West Congress #100
Tucson, Arizona 85701

Minutes of Meeting
January 23, 2004

Present:

Dr. J. Dale Nations, Chairman
Mr. Robert L. Jones, Vice-Chairman
Mrs. Michele P. Negley, Member
Mr. Robert L. Wagner, Member
Dr. Larry D. Fellows, Director and State Geologist
Mr. Steven L. Rauzi, Oil and Gas Administrator

Dr. J. Dale Nations, Chairman, called the regular Commission Meeting of January 23 to order at 10:00 a.m. in Room 321, State Land Department Building, Phoenix, Arizona.

COPPER EAGLE GAS STORAGE WELLS 1-24 SUNCOR (PERMIT 909), 1-19 SUNCOR (PERMIT 911), AND 1-12 KAKERLEE (PERMIT 912), MARICOPA COUNTY

Mr. Rauzi discussed El Paso's written request for temporary abandonment and described the mechanical integrity of the wells. He recommended temporary abandonment for a period of five years. Mr. Gettman reported that El Paso purchased Copper Eagle in August 2003 and described the ongoing testing to determine the viability of their gas-storage project.

Mr. Wagner moved, seconded by Mr. Jones:

**THAT THE COMMISSION APPROVE COPPER EAGLES'S REQUEST FOR
TEMPORARY ABANDONMENT FOR A PERIOD OF FIVE YEARS**

Motion carried unanimously.

SUNDRY NOTICES AND REPORTS ON WELLS

1. Name of Operator Copper Eagle Gas Storage LLC - a subsidiary of El Paso Natural Gas
 2. OIL WELL GAS WELL OTHER (Specify) Stratigraphic Test
 3. Well Name Kakerlee 1-12
 Location 1580' FSL + 330' FFL
 Sec. 12 Twp. 2N Rge. 2W County Maricopa, Arizona
 4. Federal, State, or Indian Lease Number, or lessor's name if fee lease Kakerlee
 5. Field or Pool Name Luke - Glendale

6. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	WEEKLY PROGRESS <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	DIRECTIONAL DRILL <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	PERFORATE CASING <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ALTER CASING <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	<u>TEMPORARY</u>	ABANDONMENT <input checked="" type="checkbox"/>
(OTHER) _____	<input type="checkbox"/>	(OTHER) _____	<input type="checkbox"/>

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log, Form 4)

1. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.

In August of 2003 El Paso Natural Gas Company acquired Copper Eagle Gas Storage LLC (as a wholly owned subsidiary) and its assets including the temporarily abandoned Kakerlee 1-12 Stratigraphic Test Well. El Paso Natural Gas is actively marketing the Copper Eagle Gas Storage project to provide natural gas storage services to meet the growing natural gas needs of our customers in Arizona. If we are successful in contracting for the development of the Copper Eagle gas storage caverns and receive the necessary permits from the Federal Energy Regulatory Commission, Environmental Protection Agency, Arizona Department of Environmental Quality, and the Arizona Oil & Gas Conservation Commission, it is Copper Eagle's intent to convert the Kakerlee 1-12 to a Class 1 disposal well. At this point the well will be used to dispose of the brine that will be developed in solution mining the storage caverns at the project site approximately 5 miles to the northeast (Section 2, 2N, 1E).

Consequently, Copper Eagle Gas Storage LLC is requesting that the temporary abandonment status of Kakerlee 1-12 be extended for up to five years as provided for in AAC R12-7-125. Attached is a schematic of the current completion of the Kakerlee 1-12 and a copy of the Cement Bond Log for the Kakerlee Kakerlee 1-12. The cementing records and daily drilling and completion records including mechanical integrity testing for this well have previously been provided to the Commission.

8. I hereby certify that the foregoing is true and correct.

Signed Suzanne W. Settem Title Manager Date 1-7-04

Permit No. 912

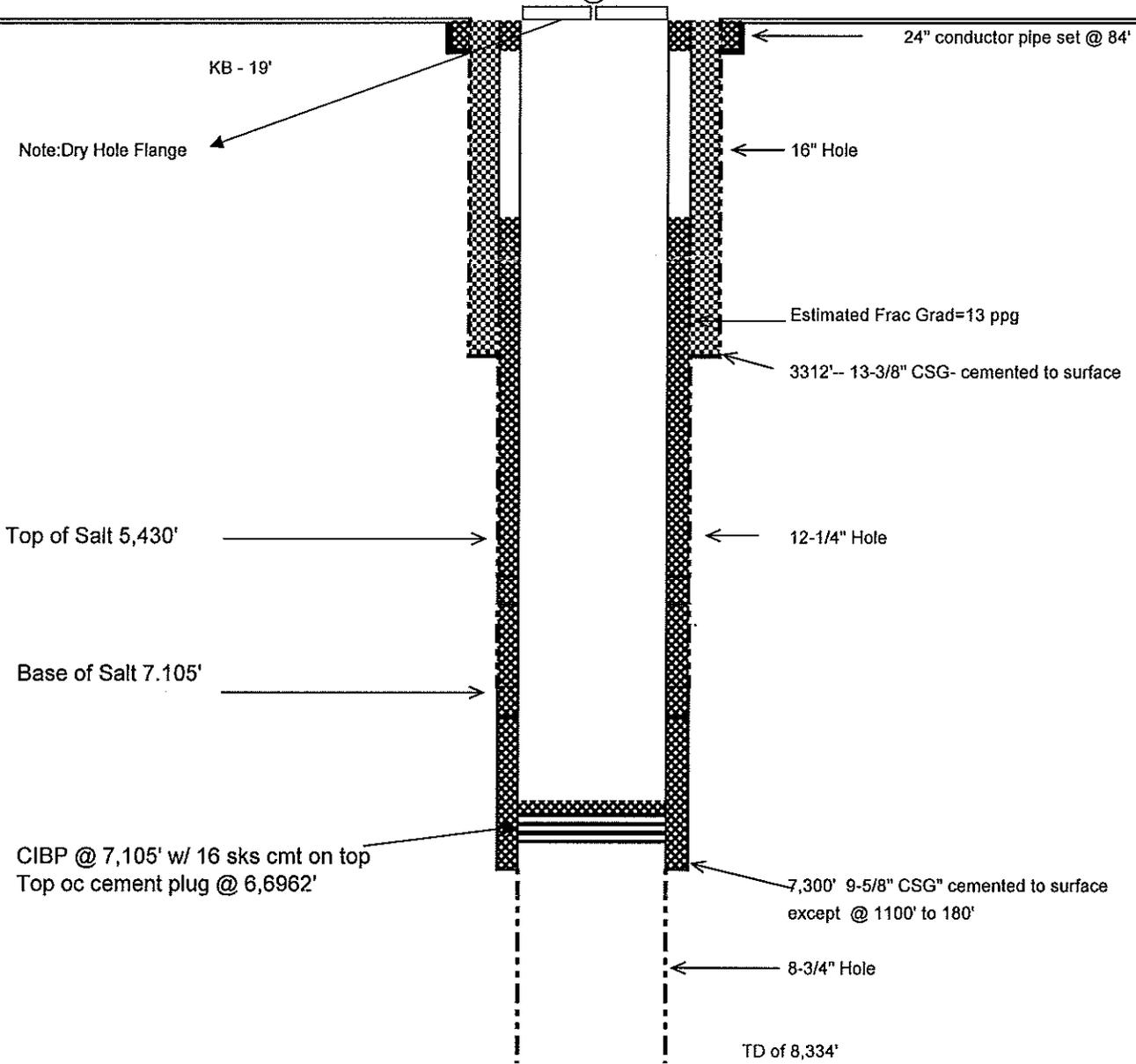
STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
 Sundry Notice and Reports On Wells
 File One Copy

Form No. 25

Copper Eagle Gas Storage, L.L.C.
Kakerlee 1-12
Maricopa County, Arizona
Luke-Glendale Field

912

WELLBORE SCHEMATIC



PLUGGING RECORD

602-250-3109

Operator <u>Copper Eagle Gas Storage LLC</u>		Address & Phone number <u>500 N. 5th St. - Phoenix, AZ</u>	
Federal, State, or Indian Lease No. or lessor's name if fee lease <u>Kakerlee</u>		Well No. <u>1-12</u>	Field & Reservoir <u>Wildcat - Luke/Glendale</u>
Location of Well <u>1580' FSL x 330' FEL</u>		Sec - Twp - Rge <u>12-2N-2W</u>	County <u>Maricopa</u>
Application to drill this well was filed in name of <u>Copper Eagle Gas Storage LLC</u>	Has this well ever produced oil or gas <u>NO</u>	Character of well at completion (Initial production): Oil (bbls/day) _____ Gas (MCF/day) _____ Dry? _____	
Date plugged <u>9-26-02</u>	Total depth <u>8334'</u>	Amount well producing when plugged: Oil (bbls/day) _____ Gas (MCF/day) _____	Water (bbls/day) _____
Name of each formation containing oil or gas. Indicate which formation open to wellbore at time of plugging	Fluid content of each formation	Depth interval of each formation	Size, kind & depth of plugs used. Indicate zones squeeze cemented, giving amount of cement
<u>None</u>			

CASING RECORD

Size pipe	Put in well (ft.)	Pulled out (ft.)	Left in well (ft.)	Give depth and method of parting casing (shot, etc.)	Packers and shoes
<u>24"</u>	<u>84'</u>	<u>-0-</u>	<u>84'</u>		<u>84'</u>
<u>13 3/4"</u>	<u>3312'</u>	<u>0</u>	<u>3312'</u>		<u>DV-Tool @ 1320'</u>
<u>9 5/8"</u>	<u>7130'</u>	<u>-0-</u>	<u>7130'</u>		<u>DV-Tool @ 4016'</u>
					<u>No cement from 1100' to 120'</u>

Was well filled with heavy drilling mud, according to regulations?

Indicate deepest formation containing fresh water

NAME AND ADDRESSES OF ADJACENT LEASE OPERATORS OR OWNERS OF THE SURFACE

Name	Address	Direction from this well
<u>None</u>		

In addition to other information required on this form, if this well was plugged back for use as a fresh water well, give all pertinent details of plugging operations to base of fresh water sand, perforated interval to fresh water sand, name and address of surface owner, and attach letter from surface owner authorizing completion of this well as a water well and agreeing to assume full liability for any subsequent plugging which might be required.

Use reverse side for additional detail.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Drilling Engineer of the Beamer Engineering, Inc (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.

Date 3-5-03

Signature [Signature]

RECEIVED

MAR 10 2003

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

Permit No. 912

Form No. 10

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

Plugging Record
File One Copy

TEMP ABD

APPLICATION TO PLUG AND ABANDON

FIELD Wildcat
 OPERATOR Copper Eagle Gas Storage ADDRESS & PHONE 500 N. 5th St Phoenix, AZ 85002
 LEASE NUMBER (Lessor's name if fee) Kakerlee WELL NO. 1-12
 LOCATION 1580' FSL + 330' FFL
Sec 12 Twp 2N Rge 2W Maricopa County, Arizona
 TYPE OF WELL Stratigraphic Test TOTAL DEPTH 8334'
 (Oil, Gas, or Dry)

ALLOWABLE (If Assigned) _____

LAST PRODUCTION TEST OIL _____ (Bbls.) WATER _____ (Bbls.)
 GAS _____ (MCF) DATE OF TEST _____

PRODUCING HORIZON _____ PRODUCING FROM _____ TO _____

1. COMPLETE CASING RECORD	hole size	cs size	WLS		Depth
Conductor	30"	24"	946	5/8"	0-84'
Surface	16"	13 3/8"	54.50	J-55 STC	0-945'
			61.00	J-55 STC	945-2502'
			68.00	J-55 BK	2502-3312'
Production	12 1/4"	9 5/8"	43.50	P-110 HC LTC	0-5402'
			53.50	P-110 HC LTC	5402-7131'

2. FULL DETAILS OF PROPOSED PLAN OF WORK

9-25-02 Set C&BP @ 7105'. Spot 16 sx cmt on plug. Top of cement @ 6962'
 9-26-02 Install Dryhole Cap
 Dry tool @ 4016'
 Stage packer @ 4121'

DATE COMMENCING OPERATIONS 9-25-02
 NAME OF PERSON DOING WORK Charles Tucker ADDRESS 323 Travis St. Suite 1425 Shreveport, LA 7101

Signature James A. [unclear]
 Title Drilling Engineer
 Address 323 Travis St. Suite 1425 Shreveport, LA
 Date 10-11-02

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



Date Approved _____
 STATE OF ARIZONA
 OIL & GAS CONSERVATION COMMISSION
 By _____

STATE OF ARIZONA
 OIL & GAS CONSERVATION COMMISSION
 Application to Plug and Abandon
 File Two Copies
 Form No. 9

Permit No. 00912

TEMP ABANDONMENT

SUNDRY NOTICES AND REPORTS ON WELLS

1. Name of Operator Copper Eagle Gas Storage, LLC
 2. OIL WELL GAS WELL OTHER (Specify) Stratigraphic Test
 3. Well Name #1-12 Kakerlee
 Location 1580' FSL * 330' FEL
 Sec. 12 Twp. 2N Rge. 2W County Maricopa, Arizona
 4. Federal, State, or Indian Lease Number, or lessor's name if fee lease _____

5. Field or Pool Name Wildcat

6. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF PULL OR ALTER CASING
 FRACTURE TREAT DIRECTIONAL DRILL
 SHOOT OR ACIDIZE PERFORATE CASING
 REPAIR WELL CHANGE PLANS
 (OTHER) _____

SUBSEQUENT REPORT OF:

WATER SHUT-OFF WEEKLY PROGRESS
 FRACTURE TREATMENT REPAIRING WELL
 SHOOTING OR ACIDIZING ALTER CASING
 ABANDONMENT
 (OTHER) Temporary Abandonment

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log, Form 4)

1. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

8-8-02 Set 84' & cemented
 8-24-02 Drill 16" hole to 3312'. Run & cement 13 3/8" csg. to surface. DV tool @ 1320'
 9-3-02 Drill 12 1/4" hole to 6000' T.
 9-9-02 Drill 8 1/2" hole to 7415'
 9-9-02 Cut Core #1 7415' to 7428' - recover 13' Volcanics
 9-10-02 Cut Core #2 7428' to 7430'
 9-13-02 Drill 8 1/2" hole to 8334'
 9-17-02 Open hole to 8 1/2" to 7130'
 9-18-02 Run a cement 9 5/8" csg to 7130'. DV tool @ 4016'
 No cement from 1100' to 180'.
 9-23-02 Injection test @ 8297' to 8304' @ 26 BPM - max psi - 2500 psi
 9-24-02 Injection low test 7130' to 8334' @ 60 BPM & 2765 psi
 9-25-02 Injection test 7130' to 8334'
 9-25-02 Set CIBP @ 7105'. Spot 16 sx unit on plug. Top of plug @ 6962'.
 9-26-02 Install dry hole cap
 Top of Salt @ 5430' Base of Salt - 7105' Basement Top -

8. I hereby certify that the foregoing is true and correct.

Signed James A. [Signature] Title Drilling Engineer Date 10-11-02

Permit No. 00912



STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
 Sundry Notice and Reports On Wells
 File One Copy
 Form No. 25

TEMP ABANDON

Subject: FW: Copper Eagle Gas Storage, Kakerlee Stratigraphic Test No.1-12, Oversize Thin Sections Results
From: "Hayden, David" <David.Hayden@ElPaso.com>
Date: Fri, 7 Mar 2003 11:21:08 -0600
To: "Steve Rauzi (steve.rauzi@azgs.az.gov)" <steve.rauzi@azgs.az.gov>

912

FYI - Will forward all final reports when received. - David

-----Original Message-----

From: Ronald Brown [mailto:rbrown@omnilabs.com]
Sent: Friday, March 07, 2003 11:02 AM
To: Hayden, David
Subject: Copper Eagle Gas Storage, Kakerlee Stratigraphic Test No.1-12, Oversize Thin Sections Results

Mr. Hayden,

We recently received the 6 oversized thin sections, which were prepared for fracture analysis of Kakerlee Strat Test 1-12 Well. Examination of these thin sections found a number of different fracture filling cement types including epidote, TiOxides, quartz, chlorite, calcite, and anhydrite; a minor amount of open fractures were also observed. I will continue with photography of these samples and recommend proceeding with general descriptions of each to be integrated into the previous completed report. If you have any questions in reference to this analysis please contact me at anytime.

Regards,
Ronald Brown

Ronald Brown
Geologist
OMNI Laboratories, Inc.
832.237-4000 (office)
832.237-4700 (fax)
713.408-6164 (cell)

This email and any files transmitted with it from the ElPaso Corporation are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the sender.

9-19-02 Call Charles Tucker @ 1-12 Kakertee
Drilling out core ~
Will run straddle packer + test
2 gpm w/ 4 bbls
Will call in BOP testers to get gpm rate.
BJ pumps no smaller than $\frac{1}{2}$ bpm (~20 spm)



CEMENT JOB REPORT

P/N 912

CUSTOMER Brammer Engineering Inc		DATE 10-SEP-02	F.R. # 179318817	SERV. SUPV. Louis Duarte							
LEASE & WELL NAME KAKERLEE 1-12 - API 02132002900000		LOCATION Sec. 12- T2N- R2W		COUNTY-PARISH-BLOCK Maricopa Arizona							
DISTRICT Farmington		DRILLING CONTRACTOR RIG # NABORS 477		TYPE OF JOB Long String							
SIZE & TYPE OF PLUGS		LIST-LOG-HARDWARE		PHYSICAL SLURRY PROPERTIES							
Cement Plug, Rubber, Bottom 9-5/8 in		700-LAP-PVTS Float Collar, 9-5/8 in		SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT ³	WATER GPG	PUMP TIME HR:MIN	BM SLURRY	BM MIX WATER	
		Centralizer, with Fines, 9-5/8 in									
MATERIALS FURNISHED BY BJ											
Fresh Water					8.34					10	
Premium Lite High Strength FM				570	12.5	2.22	11.84	00:43	225.22	160.66	
FRESH WATER					8.3					10	
TYPE III + ADDITIVES				210	14.5	1.44	6.97	02:53	53.84	34.85	
DISPLACEMENT					8.3					517.06	
TYPE III + ADDITIVES				140	14.5	1.44	6.97	10:38	35.99	23.23	
DISPLACEMENT					8.3					294.00	
Available Mix Water <u>500</u> Bbl.		Available Displ. Fluid <u>500</u> Bbl.						TOTAL	1148.00	218.75	
HOLE			TBG-CSG-D.P.				COLLAR DEPTHS				
SIZE	% EXCESS	DEPTH	SIZE	WGT.	TYPE	DEPTH	GRADE	SHOE	FLOAT	STAGE	
12.25	50	7131	9.625	47	CSG	7103				4016	
			9.625	53.5	CSG	1704	J-55	7131	7125		
LAST CASING			PKR-GMT RET-BR PL-LINER		PERF. DEPTH		TOP CONN		WELL FLUID		
SIZE	WGT.	TYPE	DEPTH	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.
13.375	85	CSG	3300					9.625	8RD	WATER BASED MUD	10
DISPL. VOLUME		DISPL. FLUID		CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		MIX WATER
VOLUME	UCM	TYPE	WGT.	BUMP PLUG	TO REV.	SG. PSI	RATSD	Operator	RATED	Operator	
517.1	BBLS	DISPLACEMENT	14.5	500	600	2500	0	0	8720	2500	TANK

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL						EXPLANATION	
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	BBL FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>	
	PIPE	ANNULUS				TEST LINES	3500 PSI
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>	
10:30						9-17-02 ON LOC. RIG UP. TEST ALL EQUIP.	
15:00						RELEASED TO HOTEL.	
02:30						9-18-02 ON LOC. RIG UP EQUIP. GO OVER JOB WITH CUST.	
05:30						RIG IS CIRCULATING WITH MUD FOR 1 HR.	
08:00						SAFETY MEETING.	
08:40						PRESS. TEST 3500 PSI.	
08:45						BEGIN STAGE #1. DROP BOMB.	
07:25	250	0	4.8	20	WATER	PUMP WATER AHEAD TO OPEN TOOL.	
07:35	0	0	0	0	WATER	TOOL OPENED @ 690 PSI.	
07:40	250	0	4.9	20	SPACER	PUMP SPACER.	
07:44	250	0	4.8	20	WATER	PUMP WATER.	
08:15	650	0	7.9	225	LEAD	PUMP 570 SX @ 12.5 PPG.	
08:50	265	0	4.5	54	TAIL	PUMP 210 SX @ 14.5 PPG.	
09:00	0	0	0	0	TAIL	STOP AND DROP BOTTOM CLOSING PLUG.	
09:05	460	0	7.5	524	MUD	DISPLACE.	
11:10	0	0	0	0	MUD	STOP, DROP BOMB FOR SIDE PORTS.	
11:20	350	0	4	38	MUD	PUMPED MUD AND OPENED PORTS @ 900 PSI.	
11:30	0	0	0	0	MUD	TURN CIRCULATION OVER TO RIG. WAIT 4 HRS.	
15:20	360	0	7.8	40	WATER	PUMP WATER AHEAD.	
15:30	230	0	4.3	85	SLURRY	PUMP 165 SX OF LEAD @ 12.5 PPG.	
15:37	350	0	7.7	165	SLURRY	PUMP 450 SX OF 2ND LEAD @ 12.5 PPG.	
15:45	350	0	7.7	25.8	SLURRY	PUMP 100 SX TAIL @ 14.5 PPG.	



SUPPLEMENTAL CEMENT JOB REPORT

P/W 912

Field Receipt # 179318817

CUSTOMER Brammer Engineering Inc		DATE 19-SEP-02		F.R. # 179318817		SERV. SUPV. Louis Daurio	
LEASE & WELL NAME - OCSG KAHERLEE 1-12 - API 02132002000000		LOCATION Farmington		COUNTY-PARISH-BLOCK Maricopa Arizona			
DISTRICT Farmington		DRLING CONTRACTOR RIG # NABORS 477		TYPE OF JOB Long String			
PRESSURE/RATE DETAIL						EXPLANATION	
TIME HR:MIN	PRESSURE - PSI		RATE BPM	BBL FLUID PUMPED	FLUID TYPE		
	PIPE	ANNULUS					
16:23	0	0	0	0	0	DROP PLUG.	
16:25	350	0	0	0	MUD	DISPLACE.	
17:30	0	0	0	0	0	BUMP PLUG. DID NOT GET CEMENT TO SURFACE.	
21:00	0	0	0	0	0	ON LOC. WAITING ON CEMENT FOR TOP OUT.	
07:00	0	0	0	0	0	9-19-02 BULK TRUCK ON LOC.	
07:30	100	0	1.5	25	SLURRY	PUMP 139 SX @ 15.8 PPG.	
09:00	0	0	0	0	0	END JOB. CEMENT TO SURFACE.	
<p><i>Charles Tucker, Brammer Engrs calls me @ home ~ 6:00pm 9-18-02 Did not get cement returns @ surf. review plan for top job & 1 ok - <u>SLR</u></i></p>							
BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL CMT RETURNS/ REVERSED	TOTAL BBL PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	SERV. SUPV.
<input checked="" type="checkbox"/> N	900	<input checked="" type="checkbox"/> N	35	529	0	<input checked="" type="checkbox"/> N	

Subject: Kakerlee 1-12 Update
From: <haydend@imcingular.com> (david hayden)
Date: Wed, 04 Sep 2002 13:12:39 -0400
To: steve.rauzi@azgs.az.gov

912

Steve:

We are currently at 6160' in the Luke Salt. Top of salt was found at 5800'. Progress has been a little slower than expected as we were stuck a few days just before drilling into the salt. We had a clay section from 3600 to 4100 and then drilled into a highly permeable, porous sand section (looked like an old river bed) down to about 5000. Had some lost circulation in the sand and probably got differentially stuck in the clay section. Currently planning a micro frac in the salt to determine the frac gradient in the salt.

Test plan is to set an open hole packer in the salt at about 6000' and pressure up with brine at very low rate (1/4 to 1/2 bpm) until fracture occurs, release pressure, TOOH, PU 12-1/4" bit and go back to drilling. If you have any questions feel free to call us here at the rig at 623.935.3068 or my cell at 318.458.4766.

Thanks,

David Hayden

David Hayden

9-9-02 Chatter Tucker, Braummer Engrs

Coring in granite @ 7425' 10' on 1st core ~ 1' per hr

Top salt stringers ~ 5720' Solid salt ~ 5990' base salt 7103'

(~ 1113' solid salt)

Soft red clay below salt then real dark brown clay.

[playa deposits?]

9-16-02 Kermet, Braummer Engrs.

Have TD @ 8334' good basement

Currently Logging

CSS point will be @ 7103' unless revised by logging interp.



CEMENT JOB REPORT

912

CUSTOMER Brammer Engineering Inc		DATE 22-AUG-02	F.R. # 179318799		SERV. SUPV. Jack Pillars							
LEASE & WELL NAME KAKERLEE 1-12		LOCATION SEC 12, T2N, R2W			COUNTY-PARISH-BLOCK Maricopa Arizona							
DISTRICT Santa Fe Springs		DRILLING CONTRACTOR RIG # NABORS 477		TYPE OF JOB Surface								
SIZE & TYPE OF PLUGS		LIST-CSG-HARDWARE		PHYSICAL SLURRY PROPERTIES								
Cement Plug, Rubber, Top 13-3/8 in		Centralizer, with Fins, 13-3/8 in		SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT ³	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER		
MATERIALS FURNISHED BY BJ												
Mud Clean II					8.5				20			
Premium Lite High Strenght FM				700	12.5	2.06	11.01	03:26	256.88	183.45		
Fresh Water					8.34				20			
Type III				200	14.5	1.44	7.01	02:35	51.15	33.36		
Water					8.34				210.96			
Mud					8.7				262.18			
Mud Clean II					8.5				20			
Available Mix Water 500 Bbl.		Available Displ. Fluid 500 Bbl.		TOTAL				841.18	216.81			
HOLE			TBG-CSG-D.P.				COLLAR DEPTHS					
SIZE	% EXCESS	DEPTH	SIZE	WGT.	TYPE	DEPTH	GRADE	SHOE	FLOAT	STAGE		
16		3307	13.375	68	CSG	3200				1300		
LAST CASING			PKR-CMT RET-BR PL-LINER			PERF. DEPTH		TOP CONN		WELL FLUID		
SIZE	WGT	TYPE	DEPTH	BRAND & TYPE		DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.
20	46.27		60				0	3307	13.375	8RD.	WATER BASED MUD	9.2
DISPL. VOLUME		DISPL. FLUID		CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		MIX WATER	
VOLUME	UOM	TYPE	WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator		
473.1	BBLs	Water Mud	8.34 8.7	800	0	0	0	0	2730	2184	Rig	

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL						EXPLANATION					
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>					
	PIPE	ANNULUS				TEST LINES 2700 PSI					
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input checked="" type="checkbox"/>					
00:00						08-23-02					
13:45						PUMP TRUCKS ON LOCATION					
14:00						SAFETY MEETING					
14:15						MIRU					
15:45						TEST LINES					
17:00						OFF LOCATION					
00:00						08-24-02					
04:00						ON LOCATION					
04:45						SAFETY MEETING					
04:55						TEST LINES 2500 P.S.I.					
05:05	250	0	5	20	SAPP	PUMP MUD CLEAN II					
05:20	260	0	6	20	WATER	PUMP WATER					
05:33	500	0	7	156	CMT	MIX LEAD CEMENT					
06:00	380	0	6	51	CMT	MIX TAIL CEMENT					
06:11	0	0				DROP FIRST PLUG					
06:14	260	0	7	501	MUD	DISPLACE CEMENT 1% OVER					
07:29	1050	0			MUD	BUMP PLUG					
07:37	0	0				DROP OPENING BOMB					
07:53	0	0	2	3	MUD	D.V. OPEN. 600 P.S.I.					
08:00						RIG CIR. MUD					
00:00											
12:05						TEST LINES 2500 P.S.I.					

8-5-02

Charles Tucker - Brammer

Plan to set Conductor pipe for 1-12 Kakerlee Thurs
Land line at rig to be 623-935-3068

Richard Jeffords (Trucking Co) @ drilling rig

Plan to move Friday morning

Permitting Service says can't move anything wider
than 10' on weekends.

= Never came up before & wouldn't know any
contacts to discuss situation.

= Feel free to have them call me but no guarantee

= Mention situation to Curt & he'll check w/
their transportation dept. maybe special permit
is possible. We'll call Jeffords @ rig.

8-16-02

Kermet, Brammer Engrs

Have moved onto the 1-12 Kakerlee location

Expect to Spud hole Sunday morning.

Will use all 13 $\frac{3}{8}$ " pipe so set ~ 3300'

8-23-02

Kermet

Will run csj this evening

Can't work hours tomorrow (Saturday)

8-1-02 Curt Brechtel, Pinnacle West, called
Doing site prep for 1-12 Kakerlee
Need more room on west end of location
Want to move location 15' due east.
OK = Authorize under A.A.C. R12-7-105(A)(1)
and R12-7-105(B)

Steven L. Raring

8-5-02 Curt Brechtel
will not move location.



PERMIT TO DRILL

This constitutes the permission and authority from the

OIL AND GAS CONSERVATION COMMISSION,
STATE OF ARIZONA,

To: COPPER EAGLE GAS STORAGE LLC
(OPERATOR)

to drill a well to be known as

#1-12 KAKERLEE STRAT TEST
(WELL NAME)

located 1580' FSL & 330' FEL

Section 12 Township 2N Range 2W, HARICOPA County, Arizona.

The N/A 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 6 day of JUNE, 19 2002.

OIL AND GAS CONSERVATION COMMISSION

By Stewart R. R. R.

EXECUTIVE DIRECTOR
OIL & GAS ADMINISTRATOR

PERMIT 00012

RECEIPT NO. 3116

A.P.I. NO. 02-13-20029

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

NAME OF COMPANY OR OPERATOR

COPPER EAGLE GAS STORAGE, LLC

Address City State Phone Number

500 N. 5th STREET PHOENIX AZ (602) 250 3109

Drilling Contractor

NABORS DRILLING USA INCORPORATED

Address 3919 ROSEDALE HWY., BAKERSFIELD, CA 93308

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, unit fee lease, name of lessor

KAKERLEE LLP*

Well number

#1-12

Elevation (ground)

1087.9'

Nearest distance from proposed location to property or lease line:

330 feet

Distance from proposed location to nearest drilling, completed or applied for well on the same lease:

N/A feet

Number of acres in lease

N/A

Number of wells on lease, including this well, completed in or drilling to this reservoir:

1

If lease purchased with one or more wells drilled, from whom purchased:

N/A

Name

Address

Well location (give footage from section lines)

330' FEL & 1580' FSL

Section - township - range or block and survey

SEC 12-T2N-R2W

Dedication [A.A.C. R12-7-104(A)(3)]

N/A

Field and reservoir (if wildcat, so state)

STRATIGRAPHIC TEST

County

MARICOPA

Distance in miles and direction from nearest town or post office

Proposed depth:

9,000 FEET

Rotary or cable tools

ROTARY

Approximate date work will start

7/15/02

Bond status ATTACHED

Organization Report

Filing Fee of \$25.00

Amount \$10,000.00

On file XX Or attached

Attached XX

Remarks

* COPPER EAGLE IS CURRENTLY FINALIZING A PURCHASE OPTION AGREEMENT. AGREEMENT WILL BE FINALIZED PRIOR TO START OF WORK ON DRILLING LOCATION.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the GENERAL MANAGER of the COPPER EAGLE GAS STORAGE LLC (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.

API # 02-013-20029

Matthew Reil
Signature

June 6, 2002
Date

Mail completed form to:
Oil and Gas Program Administrator
Arizona Geological Survey
418 W. Congress, #100
Tucson, AZ 85701-1315

Permit Number: 912

Approval Date: 6-6-02

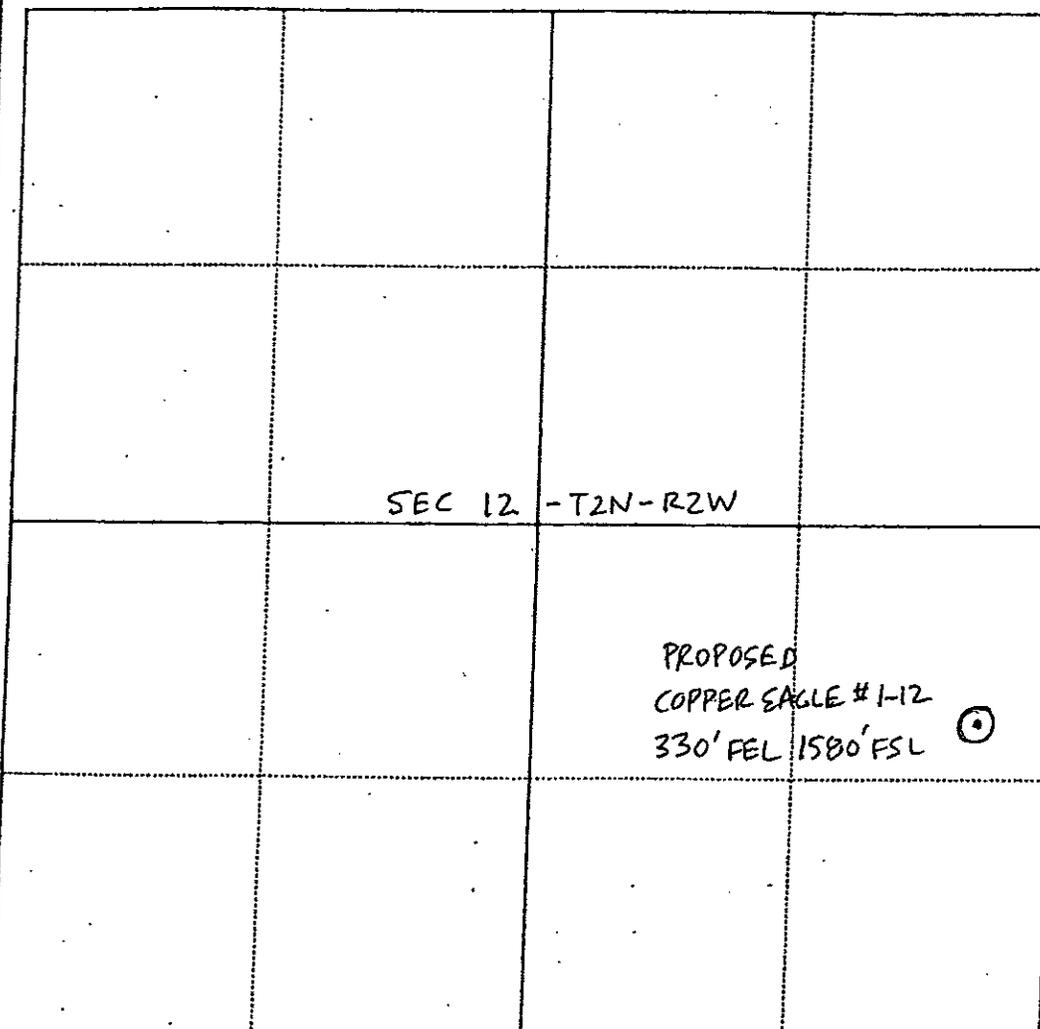
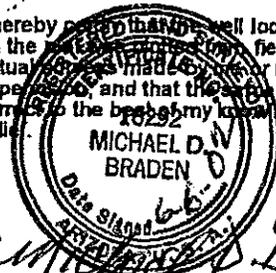
Approved By: SL Raini

**STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION**

Application to Drill or Re-enter
File Two Copies

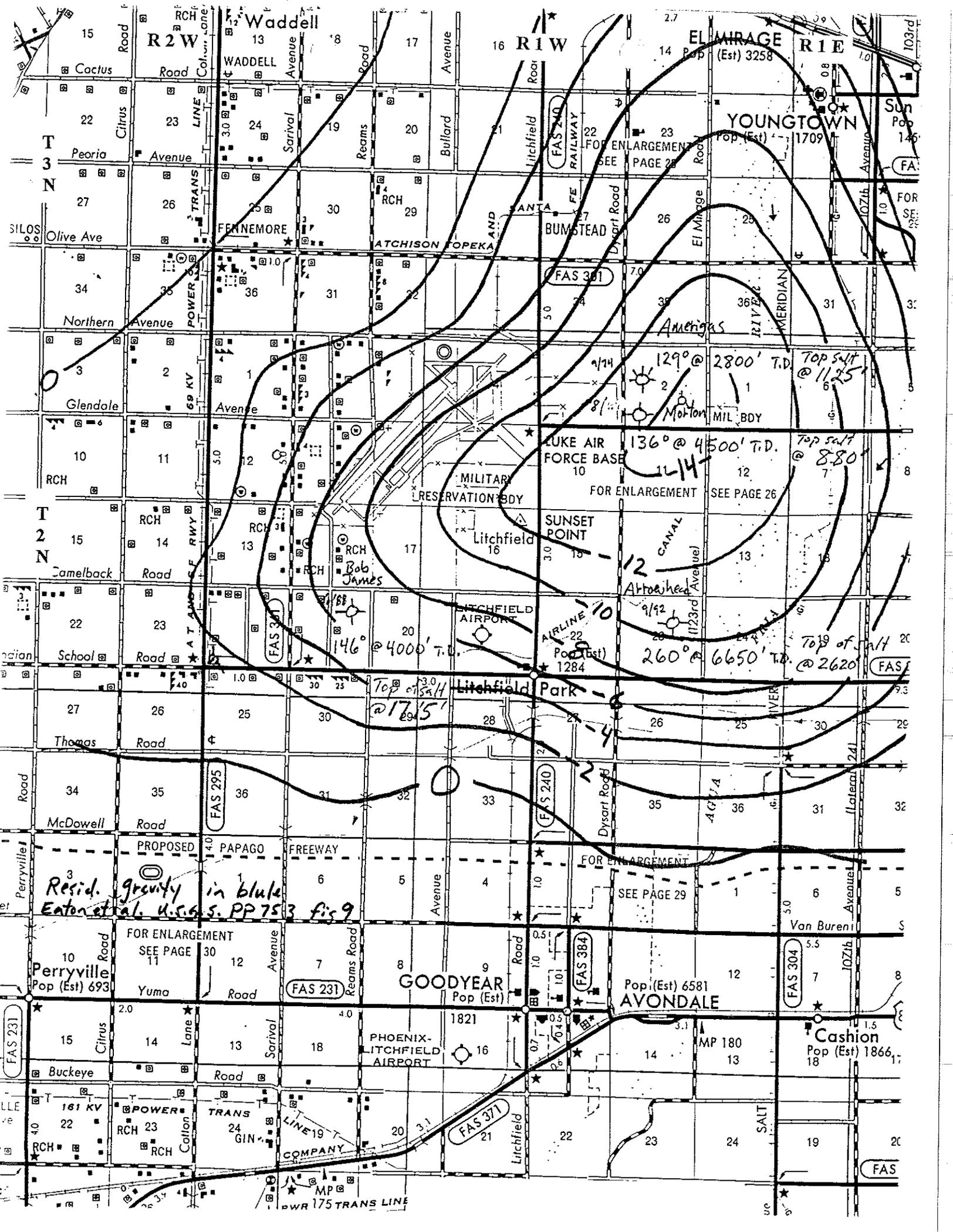
NOTICE: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.

- Operator shall outline on the plat the acreage dedicated to the well in compliance with A.C. R12-1-101.
THIS IS A STRATIGRAPHIC TEST AND EXEMPT FROM THE SPACING RULES PER R12-7-128.
- A registered surveyor 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
* COPPER EAGLE IS UNDER PURCHASE/OPTION AGREEMENT WITH KAKERLEE LLP (PENDING)
- If the answer to question four is "no", have the interests of all owners been consolidated by communitization agreement or otherwise?
YES NO If answer is "yes", give type of consolidation _____
- If the answer to question four is "no", list all the owners and their respective interests below:

Owner KAKERLEE LLP*	Land Description AGRICULTURAL /
 <p style="text-align: center;">SEC 12 - T2N - R2W</p> <p style="text-align: center;">PROPOSED COPPER EAGLE # 1-12 330' FEL 1580' FSL</p>	<p style="text-align: center;">CERTIFICATION</p> <p>I hereby certify that the information above is true and complete to the best of my knowledge and belief.</p> <p style="text-align: center;"><i>Matt Reid</i></p> <p>Name MATT REID</p> <p>Position GENERAL MANAGER</p> <p>Company COPPER EAGLE GAS STORAGE LLC</p> <p>Date June 6, 2002</p> <hr/> <p>I hereby certify that the well location shown on the plat is true and correct to the best of my knowledge and belief.</p> <div style="text-align: center;">  <p>MICHAEL D. BRADEN</p> <p>Date Signed 6-6-02</p> <p><i>Michael D. Braden</i></p> </div> <p>Date Surveyed May 2001</p> <p>Registered Land Surveyor Michael D. Braden</p> <p>Certificate No. 15-16292</p>

PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement	Type
20"	78.8	LP-ERW	0'	60'	0' - 60'	REPI-MIX	---
13 3/8"	68.0	K55-HC	0'	2500'	0' - 2500'	930SKS	PREM.
9 5/8"	43.5	P110 LT&C	0'	5250'	0' - 5250'	1099SKS	PREM.



Waddell

R1W

El Mirage (Est) 3258

R1E

YOUNGTOWN
Pop (Est) 1709

FAS 381

Americas

129° @ 2800' T.D. Top salt @ 1125'

136° @ 4500' T.D. Top salt @ 880'

MILITARY RESERVATION BOD

SUNSET POINT

FOR ENLARGEMENT SEE PAGE 26

1214

12

10

260° @ 6650' T.D. Top of salt @ 2620'

Litchfield Park

146° @ 4000' T.D. Top of salt @ 1795'

Resid. gravity in blue Eaton et al. U.S.G.S. PP 753 fig 9

FOR ENLARGEMENT SEE PAGE 29

GOODYEAR
Pop (Est) 1821

Avondale
Pop (Est) 6581

Cashion
Pop (Est) 1866

FAS 371

FAS 304

T 3 N

T 2 N

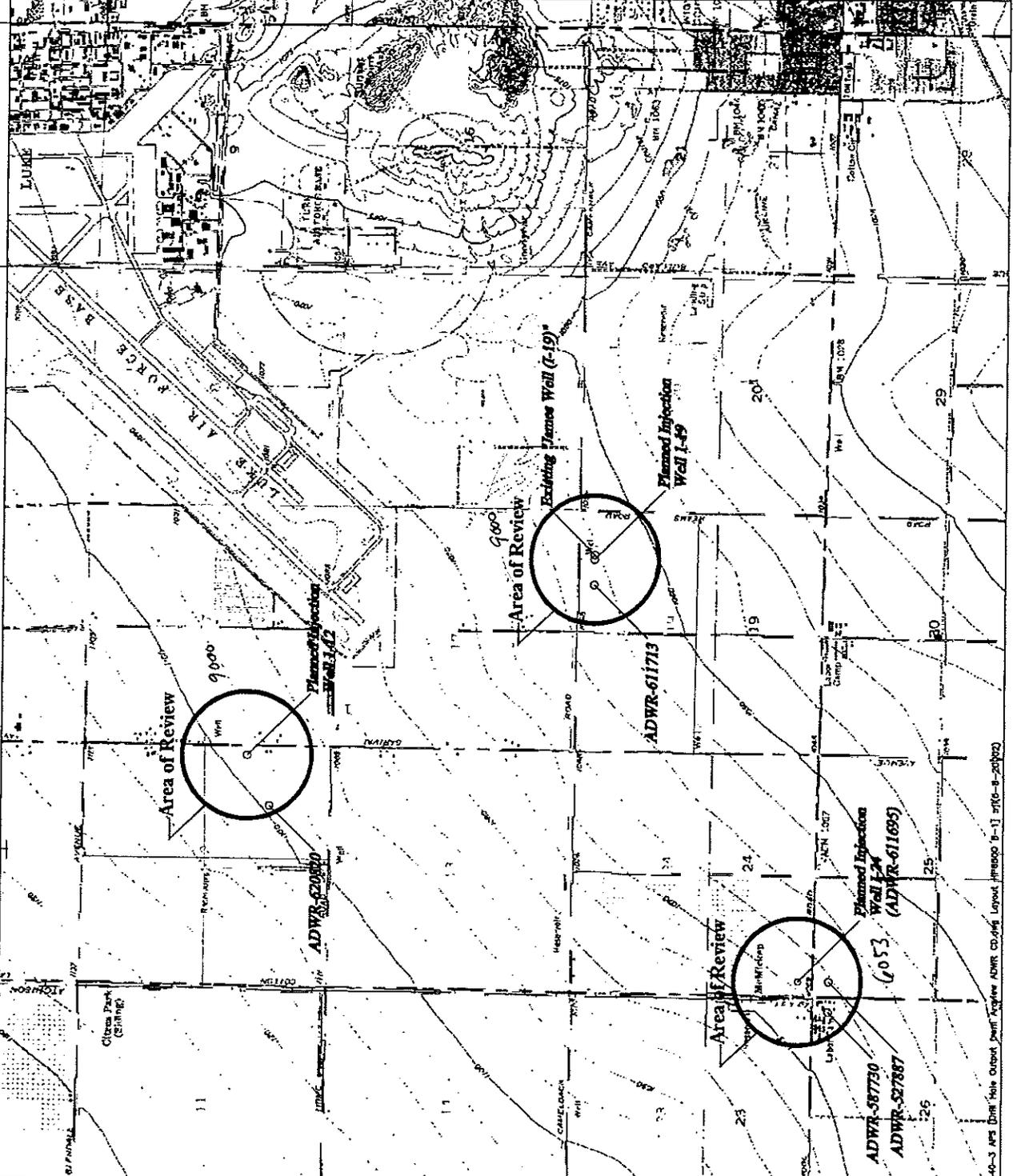
FAS 231

FAS

A 5200

+

6650



DRILLING PROGRAM

912

COPPER EAGLE GAS STORAGE, L.L.C.
KAKERLEE 1-12
STRATIGRAPHIC TEST WELL

MARICOPA COUNTY, ARIZONA
NE SE SEC 12 - T2N - R2W

PREPARED BY: JIM LINGAFELTER

05/31/02

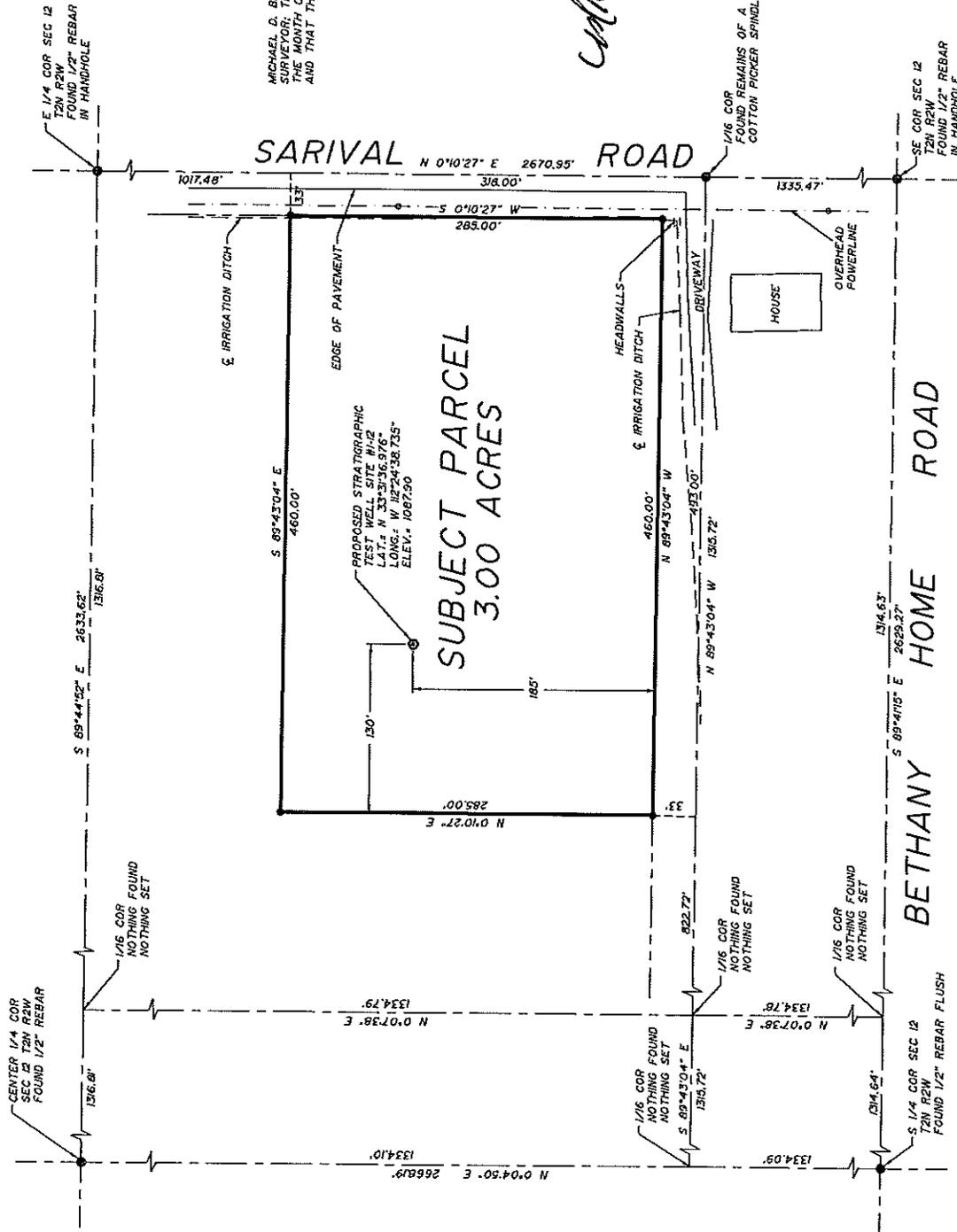
BRAMMER ENGINEERING, INC.
333 TEXAS STREET, SUITE 1425
SHREVEPORT, LA 71101-5323
(318) 429-2345

TABLE OF CONTENTS

Permit Plat	.....	1
Well Information Overview	.....	2
Well Bore Schematic	.....	4
Drilling Curve	.....	5
Chronological Prognosis	.....	6
Drilling Specifications	.....	7
BOP Requirements	.....	8
Deviation Surveys	.....	9
Mud Specifications	.....	10
Bit Specifications	.....	11
Logging Specifications	.....	12
Casing Specifications	.....	13
Cement Specifications	.....	14

RESULTS OF SURVEY

A PORTION OF THE NE 1/4 OF THE SE 1/4,
SECTION 12, TOWNSHIP 2 NORTH, RANGE 2 WEST,
OF THE GILA AND SALT RIVER MERIDIAN
MARICOPA COUNTY, ARIZONA



SCALE 1" = 130'

CERTIFICATION

MICHAEL D. BRADEN, BEING DULY SWORN, THAT HE IS A REGISTERED LAND SURVEYOR AND THAT THIS SURVEY WAS MADE UNDER HIS SUPERVISION DURING THE MONTH OF _____, 19____, AND DESCRIBED ON THIS MAP, AND THAT THIS MAP WAS PREPARED UNDER HIS DIRECTION.



Michael D. Braden

MICHAEL D. BRADEN
R.L.S. NO. 16292

• DENOTES SET 5/8" REBAR WITH CAP

ARIZONA PUBLIC SERVICE COMPANY PHOENIX, ARIZONA	
RESULTS OF SURVEY AMENDED	
NE 1/4, SE 1/4, SEC. 12, T.2 N., R.2 W., GILA AND SALT RIVER MERIDIAN MARICOPA COUNTY, ARIZONA	
CREW UBBEN-COUGHRAIN	SCALE 1" = 130'
DATE 06-06-02	DRAWN BY D.J.A.
W.A. 75-1070-0002	

MAP #02-10411

WELL INFORMATION
OVERVIEW

Operator:	Copper Eagle Gas Storage, LLC	Proposed TD:	+/- 9000'
Well Name:	Kakerlee 1-12		
Field:	Stratigraphic Test	Serial No:	
Co/Ph, State:	Maricopa County, Arizona	Elevations:	
Surface Loc:	Sec. 12-2N-R2		
BHL:	Same, Vertical Hole	Estimated Days:	
Objectives:	Clastic-Valley Fill Stratigraphic Test	Surface:	
		Production Hole:	
		Total to TD:	

Location Contractor: D&D

Drilling Contractor: Nabors Drilling USA

Contract Type: IADC Daywork

Conservation Agent: Steven L. Rauzi, Oil and Gas Program Administrator, Arizona Geological Survey. 416 W Congress, Suite 100, Tucson, Arizona 85701, 520-770-3500

NOTIFY AT SPUD, SETTING CASING, TESTING BOP'S AND P&A. Give 48-hrs notice.

Direction to Well: I-10 West of Phoenix, AZ to exit 124. Go north to Bethany Home turn left go approx. 0.5 miles to Sarival Road. Turn Right. Go approx. 0.25 miles to location on the left.

WELL INFORMATION
OVERVIEW (Cont'd.)

Hole Section (Meas. Depth)	Hole Size	Casing	Cement	Mud
0 to 60'	30"	20" X 0.375"	Grouted to surface	
0 to 2,500'	16"	13-3/8", 68#/ft, K-55 HC, ST&C	Premium Lite High Strength FM + 5% bwow NaCl 12.5 ppg; 2.06 cf/sk; 11.01 gps water	8.4 – 9.0 ppg 32-45 sec/qt
2,500' to 5,250'	12-1/4"	9-5/8", 43.5#/ft, HC P-110, LT&C	<u>Stage 1:</u> Premium Lite High Strength FM Plus 15.3% bwow NaCl + 0.5% bwoc FL-25 + 0.3% bwoc R-3 + 0.25 lbs/sk cello flake 12.50 ppg; 2.30 cf/sk; 12.26 gps water <u>Stage 2:</u> Premium Lite High Strength FM Plus 0.5% bwoc FL-25 + 0.25 lbs/sk cello flake 12.50 ppg; 1.96 cf/sk; 10.42 gps water	9.2-10.3 32-45 sec/qt
5,250' to 9,000'	7-7/8"	none	none	9.2-10.3 32-45 sec/qt

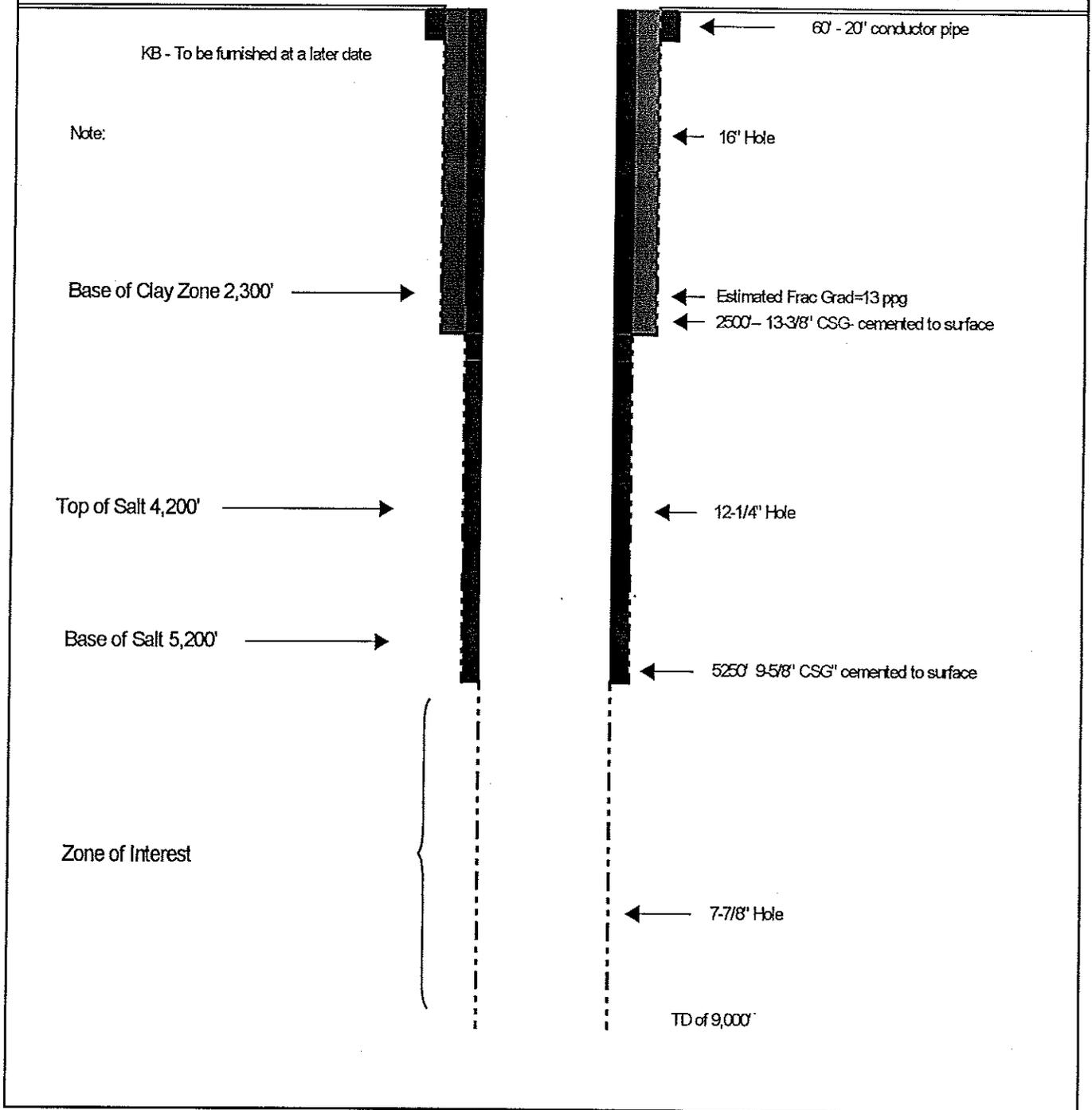
Formation	Estimated Top - TVD
Clastic and Valley Fill Sediments	0' to 4200'
Luke Basin Salt	4200' to 5200'
Clastic and Valley Fill Sediments	5200' to TD

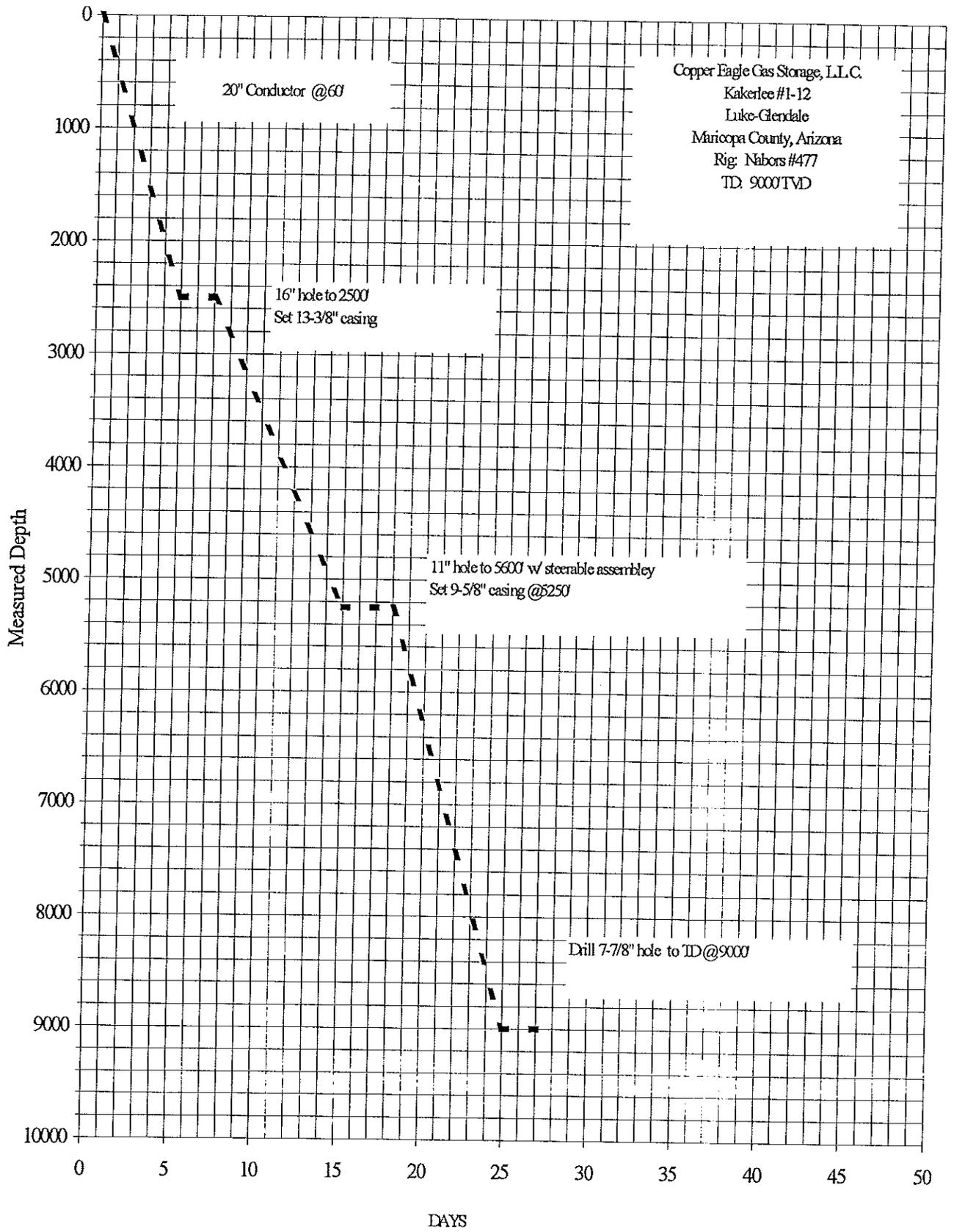
INVOICES: All equipment and services should be billed to: Brammer Engineering, Inc.
333 Texas Street, Suite 1425
Shreveport, La 71101-5323

Rig Phone: Co. Representative Charles Tucker & Kermet Lonadier
Mud Logger Epoch Well Services

Copper Eagle Gas Storage, L.L.C.
Kakerlee #1-12
Maricopa County, Arizona
Luke-Glendale Field

WELLBORE SCHEMATIC





CHRONOLOGICAL PROGNOSIS

NOTE: See Details and Specifications Section for Additional Information and Instructions!

1. Drill Rat Hole, Set 80' of 24" conductor pipe
2. Move in and RU Nabors Drilling USA Rig #477
3. Drill 16" hole to 2500' or 200' below the clay section.

NOTE: THIS WELL WILL BE DRILLED VERY NEAR FRESH WATER WELLS AND IT IS IMPERATIVE THAT ALL MEASURES ARE TAKEN TO INSURE THAT THE FRESH WATER ZONES ARE NOT IMPACTED BY DRILLING FLUIDS.

NOTE: There will be a 200' to 400' Anhydrite cap above the top of salt.

Expect top of salt at +/- 4200'

4. Circ and condition hole to run electric logs and run all electric logs.
5. Run 13-3/8" surface casing to 2,500' and cement to surface. WOC 6 hrs before cutting pipe.
6. NU 13-5/8" 3000# X 13-3/8" SOW casing head. NU 13-5/8" 5000 psi BOP's. Test rams and valves to 250-psi/3000 psi. Test annular to 250-psi/3000 psi.
7. Install wear bushing in casing head before drilling out surface casing.
8. PU 12-1/4" bit and BHA. Test casing to 1000 psi. Drill FC and 20' of cement. Retest casing. Drill shoe and 5' of formation. Test casing shoe to leak off or not to exceed 12 ppg EMW. Squeeze and retest if necessary.
9. Change over to Salt-saturated mud system and drill to 5600'. Use packed hole assembly or steerable motor to keep hole straight. POH and pick up 7-7/8" bit and drill to 9000' or approx. 200' into Basement. Use magnetic single shot to keep hole straight.
10. Circ and condition hole to run electric logs, **including CBL on surface casing.**
11. POOH and Run 9-5/8" casing to depth as determined from open hole logs in Step 10 above (expect depth to be +/- 5,250') and cement to surface. WOC 12 hrs before cutting pipe
12. NU 13-5/8" 3000# X 11" 5000# casing head. NU 13-5/8" 5000 psi BOP's. Test rams and valves to 250psi/3000psi. Test annular to 250psi/5000psi.
13. Drill out float equipment; clean hole to TD with 7-7/8" bit. Circ. w/ 10# brine; POOH
14. **Run CBL log on Production casing**
15. Run 4-1/2" Drill pipe with Baker packer and set packer at +/- 5150'. NU up Manifold.
16. RU Cudd Coiled tubing. TIH using Nitrogen to recover clean formation fluids. **Continue to jet hole till adequate clean formation fluids are recovered**
17. RU to inject filtered brine into open hole according to injection test procedure. Record all pressures and rates.
18. Release Packer and TOH. LD Packer
19. Plug well per Arizona Oil and Gas rules.
20. Lay down drill pipe and rig down and release rig.

DRILLING SPECIFICATIONS

GENERAL INSTRUCTIONS:

1. Run appropriate BHA. Discuss with operations supervisor.
2. Two TIW and one inside Gray BOP safety valves of appropriate sizes to be in open position on rig floor at all times.
3. Inspect, measure, and caliper all subsurface drilling tools prior to running in hole.
4. Design drill strings for 100,000# over pull and ensure that recommended torque values along with proper makeup procedures are used.
5. Minimize casing wear by using smooth hard band or non-hard banded drill strings inside casing. Use DP rubbers (one every other joint) inside all casing strings.
6. Optimize hydraulics.
7. **One of the objectives of this test is to detect and record the depths of all shallow fresh water zones which may require drilling surface slightly underbalanced.**
8. Record slow pump pressures and rates each tower.
9. Insure that safety meetings are conducted daily with each crew.

BOP REQUIREMENTS

Hole Size	Number	Size	WP (psig)	Test Pressure (psig)	Configuration
16"	None Req.				
12-1/4" & 7-7/8"	1 - Ann 2 - Ram	13 5/8"	5000 5000	250/3000 250/5000	Annular-Pipe-Blind

Instructions:

1. Test BOP's to above pressure when installed (with 3rd party) and every 14 days there after. Note all tests on IADC tower report.
2. Work rams on all trips. Record on morning report and IADC tower report.
3. Ensure that accumulator/closing units are checked daily.
4. Conduct BOP drills once per week with each crew as appropriate.

DEVIATION SURVEYS

Run Deviation Survey at 100' intervals, or as needed to keep hole straight as per AZ O&G R12-7-115 (deviation not to exceed 100' from offset from surface).

MUD SPECIFICATIONS

Controlled by Operator. Use Inteq Drilling Fluids for mud & chemicals.
Maintain mud parameters as follows:

DEPTH (MD)	WEIGHT	VIS	W.L.	PV	Y.P.
0' - 4200' (Fresh)	8.4 - 10.1	32-45	12-15	NC	20-25
4200' - 5250'' (Salt)	10.0 - 10.1	32-45	8-12	8-10	8-12
5,250' - 9000'. (Salt)	10.0 - 10.3	32-45	10-8	8-10	10-14

BIT SPECIFICATIONS

RECOMMENDED BIT PROGRAM:

No.	SIZE	IADC CODE	DEPTH OUT	WOB	RPM
1	16"	117	2500'	40/50	80/100
SET 13-3/8" CASING AT +/- 2500'					
2	12-1/4"	BD535	5600'	2/15	200/240
3	7-7/8"	GTX20	6300'	20/35	200/240
4	7-7/8"	GTX20	7000'	20/35	200/240
5	7-7/8"	GTX20	7500'	20/35	200/240
6	7-7/8"	GTX20	8000'	20/35	200/240
7	7-7/8"	SX40	8500'	20/35	200/240
8	7-7/8"	SX40	9000'	20/35	200/240
SET 9-5/8" CASING AT DEPTH DETERMINED FROM OPEN HOLE LOGGING (EST. +/- 5250')					

LOGGING SPECIFICATIONS

CUTTINGS: Every 10' from surface to TD

Samples of all cuttings must be supplied to the AZ Oil and Gas Commission WITHIN 10 DAYS of completion of drilling

MUD LOGGER: Epoch—From Spud to TD

DRILLSTEM TEST: Schlumberger

CORES: 3-1/2" 60' Full cores as needed

ELECTRIC LOGGING:

At 2500' or surface csg pt.

Lateralog/Neutron/Density/Dipole Sonic from TD to base of Conductor casing;

At 9000' or TD to Surface csg

Lateralog/Neutron/Density/Dipole Sonic (obtain Shear wave data)/FMI (from TD to top of injection interval)/ CBL on surface casing

NOTE: Need to discuss possible Spectrometer as well.

After running protection csg.

CBL

CASING SPECIFICATIONS

CONDUCTOR PIPE: (0' to 60')
20" x 0.375" Wall Grade B Line Pipe

SURFACE CASING: (0 TO 2500')
13-3/8" 68.00 #/ft HCK-55 ERW BTC (New, API, Prime)

PRODUCTION CASING: (0' to 5250')
9-5/8" 43.50 #/ft HC P-110 LTC (New, API, Prime)

Running Instructions:

1. Visually inspect, strap, and number each joint. Compare strap to delivery ticket.
2. Remove thread protectors and clean threads if necessary.
3. Run float shoe and float collar one joint above shoe. Weld float shoe and float collar.
4. Run centralizers 5' above shoe, at float collar, at 1st collar above float collar, and at every other collar to surface.
5. Torque to API recommended values.
6. Use API-HP thread lubricant.
7. Tag bottom and check measurements. Pick up off bottom and circulate at least 1 1/2 casing volumes or two bottoms up minimum prior to cementing.
8. Reciprocate casing while circulating and cementing.
9. Hang string in full tension.
10. Do 150 sx top job with fresh water cement

NOTE: Do not drill out or test casing for 24-hr minimum after cementing.

Testing Instructions:

1. Clean out casing with 7-7/8" bit to float collar.
2. Test casing to 1000 psi for 30 minutes.
3. Drill FC plus 20' of cement and retest casing to 1000 psi.
4. Drill out rest of shoe joint plus 5' of formation.
5. Circ hole clean and test shoe to 13 ppg EMW. If shoe fails to test, squeeze and retest.

CEMENT SPECIFICATIONS

SURFACE CASING:

Casing Size:	13-3/8"	Mud Weight:	9.3 ppg
Hole Size:	16"	Fillup:	Surface
Depth:	2500'	Excess:	Caliper plus 15%
DV Tool @ 600'			

Recommended Cement:

Stage 1 2500' to 600'

Cement Slurry:	619 sks Premium Lite High Strength FM + 5% bwow Sodium Chloride
	12.50 ppg 2.06 cf/sk 11.01 gps water
	111 sks Type III cement
	14.5 ppg 1.45 cf/sk 6.96 gps water

Stage 2 600' to surface

Cement Slurry	100 sks Premium Lite High Strength FM + 5% bwow Sodium Chloride
	12.50 ppg 2.06 cf/sk 11.01 gps water
	100 sks Type III cement
	14.5 ppg 1.45 cf/sk 6.96 gps water

Instructions:

1. Reciprocate casing while circulating and cementing
2. Bump plug with 500 psi over circulating pressure.
3. Perform top job using 1" pipe, if necessary.
4. Hold casing in full tension until initial cement set up.
5. WOC 12 hrs before cutting csg.
6. WOC 24 hrs before drilling out.

CEMENT SPECIFICATIONS (cont'd.)

PROTECTION CASING:

Casing Size: 9-5/8" Mud Weight: 9.5 ppg
Hole Size: 12-1/4" Fillup: Surface
Depth: 5250' Excess: Caliper plus 15%
Stage Collar @ 4000'
Davis Lynch 7' Seal Element Packer/Stage Collar @ 5250'

Recommended Cement:
1st Stage 5250' to 4000'

Lead Slurry: 170 sacks Premium Lite High Strength FM +
12.50 ppg 2.30 cf/sack 12.26 gps

Tail Slurry: 150 sacks Type III + Additives
14.5 ppg 1.39 cf/sack 6.81 gps

Recommended Cement:
2nd Stage 4000' to surface

Lead Slurry: 663 sacks Premium Lite High Strength FM + 0.25% bwoc Cello Flake + 0.5%
bwoc FL-25
12.50 ppg 1.96 cf/sack 10.42 gps

Tail Slurry: 116 sacks Type III + 0.25% bwoc Cello Flake
14.5 ppg 1.39 cf/sack 6.79 gps

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS

Bond Serial No. 104154344

That we: Copper Eagle Gas Storage LLC

of the County of El Paso in the State of Colorado

as principal, and Travelers Casualty and Surety Company of America

of One Tower Square, Hartford, CT 06183-6014

AUTHORIZED TO DO BUSINESS WITHIN THE STATE OF ARIZONA

as surety, are held and firmly bound unto the State of Arizona and the Oil and Gas Conservation Commission, hereinafter referred to as the "Commission", in the penal sum of Twenty Five Thousand Dollars and 00/100, (\$25,000.00****)

The conditions of this obligation are that, whereas the above bounden principal proposes to drill a well or wells for oil, gas or stratigraphic purposes in and upon the following described land situated within the State, to-wit:

Suncor #1-19 Stratigraphic Test, Suncor #1-24 Stratigraphic Test, Kackerlee #1-12 Stratigraphic Test

(May be used as blanket bond or for single well)

NOW THEREFORE, if the above bounden principal shall comply with all the provisions of the Laws of this State and the rules, regulations and orders of the Commission, especially with reference to the requirements of A.R.S. § 27-516, providing for the proper drilling, casing and plugging of said well or wells, and filing with the Oil and Gas Conservation Commission all notices and records required by said Commission, then in the event said well or wells do not produce oil or gas in commercial quantities, or cease to produce oil or gas in commercial quantities, this obligation is void; otherwise it shall remain in full force and effect.

Whenever the principal shall be, and declared by the Oil and Gas Conservation Commission in violation of the Laws of this State and the rules, regulations and orders of the Commission, the surety shall promptly:

- 1. Remedy the violation by its own efforts, or
2. Obtain a bid or bids for submission to the Commission to remedy the violation, and upon determination by the Commission and the surety of the lowest responsible bidder, arrange for a contract between such bidder and the Commission, and make available as work progresses sufficient funds to pay the cost of remedying the violation; but not exceeding, including other costs and damages for which the surety may be liable hereunder, the amount set forth in the first paragraph hereof.

Liability under this bond may not be terminated without written permission of this Commission.

WITNESS our hands and seals, this 1st day of September October, 20 03

Approved By: MAM Legal Dept.

Patricia A. Shelton, President, El Paso Natural Gas Company, as the sole member of Copper Eagle Gas Storage, LLC Principal

WITNESS our hands and seals, this 17th day of September, 20 03

Travelers Casualty and Surety Company of America

Suzanne Holden, Attorney-In-fact Surety N/A

(Surety, Resident Arizona Agent If issued in a state other than Arizona)

(If the principal is a corporation, the bond should be executed by its duly authorized officers, with the seal of the corporation affixed. When principal or surety executes this bond by agent, power of attorney or other evidence of authority must accompany the bond.)

Approved Date: 10-14-03 STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION By: SL Raring

STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION Bond File Two Copies Form No. 2

Permit No. 912

PERFORMANCE BOND
KNOW ALL MEN BY THESE PRESENTS

Bond Serial No. 929237471

That we: Copper Eagle Gas Storage LLC
of the County of Maricopa in the State of Arizona
as principal, and Continental Casualty Company
of Hartford, Connecticut

AUTHORIZED TO DO BUSINESS WITHIN THE STATE OF ARIZONA.

as surety, are held and firmly bound unto the State of Arizona and the Oil and Gas Conservation Commission, hereinafter referred to as the "Commission", in the penal sum of Ten Thousand Dollars and No/100 (\$10,000.00) lawful money of the United States, for which payment, well and truly to be made, we bind ourselves, and each of us, and each of our heirs, executors, administrators or successors, and assigns jointly and severally, firmly by these presents.

The conditions of this obligation are that, whereas the above bounden principal proposes to drill a well or wells for oil, gas or stratigraphic purposes in and upon the following described land situated within the State, to-wit:

0.25 miles North of Intersection of Bethany Home and Sarival Road

(May be used as blank bond or for single well)

NOW, THEREFORE, if the above bounden principal shall comply with all the provisions of the Laws of this State and the rules, regulations and orders of the Commission, especially with reference to the requirements of A.R.S. § 27-516, providing for the proper drilling, casing and plugging of said well or wells, and filing with the Oil and Gas Conservation Commission all notices and records required by said Commission, then in the event said well or wells do not produce oil or gas in commercial quantities, or cease to produce oil or gas in commercial quantities, this obligation is void; otherwise it shall remain in full force and effect.

Whenever the principal shall be, and declared by the Oil and Gas Conservation Commission in violation of the Laws of this State and the rules, regulations and orders of the Commission, the surety shall promptly:

1. Remedy the violation by its own efforts, or
2. Obtain a bid or bids for submission to the Commission to remedy the violation, and upon determination by the Commission, and the Surety of the lowest responsible bidder, arrange for a contract between such bidder and the Commission, and make available as work progresses sufficient funds to pay the cost of remedying the violation; but not exceeding, including other costs and damages for which the surety may be liable hereunder, the amount set forth in the first paragraph hereof.

Liability under this bond may not be terminated without written permission of this Commission.

WITNESS our hands and seals, this 4th day of June, 2002

Copper Eagle Gas Storage LLC

By: Matthew J. [Signature] Principal

10-15-03

WITNESS our hands and seals, this 4th day of June, 2002

Continental Casualty Company

By: Carol A. Tabone Surety

Carol A. Tabone, Attorney-in-Fact

(Surety, Resident Arizona Agent
if issued in a state other than Arizona)

(If the principal is a corporation, the bond should be executed by its duly authorized officers, with the seal of the corporation affixed. When principal or surety executes this bond by agent, power of attorney or other evidence of authority must accompany the bond.)

Approved 6-6-02
Date
STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
By: SL Rariz

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Bond
File Two Copies
Form No. 2

Permit No. 912

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That Continental Casualty Company, an Illinois corporation, National Fire Insurance Company of Hartford, a Connecticut corporation, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania corporation (herein called "the CNA Companies"), are duly organized and existing corporations having their principal offices in the City of Chicago, and State of Illinois, and that they do by virtue of the signatures and seals herein affixed hereby make, constitute and appoint Mikal F. Cronin, Steven E. Minard, Michael D. Specht, William A. Ames, Deborah K. Anderson, Lori L. Dawson, Carol A. Tabone, Individually

of Phoenix, Arizona
their true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on their behalf bonds, undertakings and other obligatory instruments of similar nature --- In Unlimited Amounts ---

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of their corporations and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law and Resolutions, printed on the reverse hereof, duly adopted, as indicated, by the Boards of Directors of the corporations.

In Witness Whereof, the CNA Companies have caused these presents to be signed by their Vice President and their corporate seals to be hereto affixed on this 5th day of December, 2001.



Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

Michael Gengler

Michael Gengler Group Vice President

State of Illinois, County of Cook, ss:

On this 5th day of December, 2001, before me personally came Michael Gengler to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Chicago, State of Illinois; that he is a Group Vice President of Continental Casualty Company, an Illinois corporation, National Fire Insurance Company of Hartford, a Connecticut corporation, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania corporation described in and which executed the above instrument; that he knows the seals of said corporations; that the seals affixed to the said instrument are such corporate seals; that they were so affixed pursuant to authority given by the Boards of Directors of said corporations and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporations.



My Commission Expires September 17, 2005

Diane Faulkner

Diane Faulkner Notary Public

CERTIFICATE

I, Mary A. Ribikawskis, Assistant Secretary of Continental Casualty Company, an Illinois corporation, National Fire Insurance Company of Hartford, a Connecticut corporation, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania corporation do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolution of the Board of Directors of the corporations printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporations this 4th day of June, 2002



Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

Mary A. Ribikawskis

Mary A. Ribikawskis Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF CONTINENTAL CASUALTY COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the Board of Directors of the Company.

"Article IX—Execution of Documents

Section 3. Appointment of Attorney-in-fact. The Chairman of the Board of Directors, the President or any Executive, Senior or Group Vice President may, from time to time, appoint by written certificates attorneys-in-fact to act in behalf of the Company in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. Such attorneys-in-fact, subject to the limitations set forth in their respective certificates of authority, shall have full power to bind the Company by their signature and execution of any such instruments and to attach the seal of the Company thereto. The Chairman of the Board of Directors, the President or any Executive, Senior or Group Vice President or the Board of Directors, may, at any time, revoke all power and authority previously given to any attorney-in-fact."

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company at a meeting duly called and held on the 17th day of February, 1993.

"Resolved, that the signature of the President or any Executive, Senior or Group Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted pursuant to Section 3 of Article IX of the By-Laws, and the signature of the Secretary or an Assistant Secretary and the seal of the Company may be affixed by facsimile to any certificate of any such power and any power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company."

ADOPTED BY THE BOARD OF DIRECTORS OF AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA:

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the Board of Directors of the Company.

"Article VI—Execution of Obligations and Appointment of Attorney-in-Fact

Section 2. Appointment of Attorney-in-fact. The Chairman of the Board of Directors, the President or any Executive, Senior or Group Vice President may, from time to time, appoint by written certificates attorneys-in-fact to act in behalf of the Company in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. Such attorneys-in-fact, subject to the limitations set forth in their respective certificates of authority, shall have full power to bind the Company by their signature and execution of any such instruments and to attach the seal of the Company thereto. The President or any Executive, Senior or Group Vice President may at any time revoke all power and authority previously given to any attorney-in-fact."

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company at a meeting duly called and held on the 17th day of February, 1993.

"Resolved, that the signature of the President or any Executive, Senior or Group Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted pursuant to Section 2 of Article VI of the By-Laws, and the signature of the Secretary or an Assistant Secretary and the seal of the Company may be affixed by facsimile to any certificate of any such power and any power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company."

ADOPTED BY THE BOARD OF DIRECTORS OF NATIONAL FIRE INSURANCE COMPANY OF HARTFORD:

This Power of Attorney is made and executed pursuant to and by authority of the following Resolution duly adopted on February 17, 1993 by the Board of Directors of the Company.

"RESOLVED: That the President, an Executive Vice President, or any Senior or Group Vice President of the Corporation may, from time to time, appoint, by written certificates, Attorneys-in-Fact to act in behalf of the Corporation in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. Such Attorney-in-Fact, subject to the limitations set forth in their respective certificates of authority, shall have full power to bind the Corporation by their signature and execution of any such instrument and to attach the seal of the Corporation thereto. The President, an Executive Vice President, any Senior or Group Vice President or the Board of Directors may at any time revoke all power and authority previously given to any Attorney-in-Fact."

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company at a meeting duly called and held on the 17th day of February, 1993.

"RESOLVED: That the signature of the President, an Executive Vice President or any Senior or Group Vice President and the seal of the Corporation may be affixed by facsimile on any power of attorney granted pursuant to the Resolution adopted by this Board of Directors on February 17, 1993 and the signature of a Secretary or an Assistant Secretary and the seal of the Corporation may be affixed by facsimile to any certificate of any such power, and any power or certificate bearing such facsimile signature and seal shall be valid and binding on the Corporation. Any such power so executed and sealed and certified by certificate so executed and sealed, shall with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Corporation."

ORGANIZATION REPORT

Full Name of the Company, Organization, or Individual

Copper Eagle Gas Storage LLC

Mailing Address and Phone Number

Two North Nevada, Colorado Springs CO 80903 719-520-4533

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

Limited Liability Company

Purpose of Organization (State type of business in which engaged)

Gas Storage

If a reorganization, give name and address of previous organization

If a foreign corporation give (1) State where incorporated (2) Name and mailing address of state agent (3) Date of permit to do business in state

Delaware LLC CT Corporation 9/16/01
3225 North Central Ave
Phoenix AZ 85012

Principal Officers or Partners (if partnership) NAME	TITLE	MAILING ADDRESS
<u>Patrica Shelton</u>	<u>President</u>	<u>Two North Nevada</u> <u>Colorado Springs CO 80903</u>
<u>Greg Gruber</u>	<u>Sr. Vice President</u>	<u>1001 Louisiana Street</u> <u>Houston TX 77002</u>
<u>Winston Johnson</u>	<u>Sr. Vice President</u>	<u>" "</u>
<u>Daniel Martin</u>	<u>Sr. Vice President</u>	<u>" "</u>
<u>Alvin Clark</u>	<u>Vice President</u>	<u>Two North Nevada</u> <u>Colorado Springs CO 80903</u>
<u>Joaquin Garcia Jr</u>	<u>Vice President</u>	<u>" "</u>
<u>William Healy</u>	<u>Vice President</u>	<u>" "</u>
<u>Catherine Palazzari</u>	<u>Vice President</u>	<u>" "</u>

DIRECTORS NAME

MAILING ADDRESS

CERTIFICATE I, the undersigned, under the penalty of perjury state that I am the senior counsel of the El Paso Natural Gas Company, the sole member (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

Date

[Signature]
Sept. 16, 2003

STATE OF ARIZONA
 OIL & GAS CONSERVATION COMMISSION

Organization Report
 File One Copy

Form No. 1

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

ORGANIZATION REPORT

Full Name of the Company, Organization, or Individual

Copper Eagle Gas Storage, LLC

Mailing Address and Phone Number

400 N. 5th Street, MS 8974, Phoenix, AZ 85004 602-250-3109

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

Limited Liability Company

Purpose of Organization (State type of business in which engaged)

Underground Gas Storage

If a reorganization, give name and address of previous organization

Not Applicable

If a foreign corporation, give (1) State where incorporated Delaware	(2) Name and mailing address of state agent Corporation Trust Center 1209 Orange Street Wilmington, DE 19801	(3) Date of permit to do business in state 9/06/01
Principal Officers or Partners (if partnership) NAME	TITLE	MAILING ADDRESS
Matt Reid	General Manager	400 N. 5th Street, MS 8974 Phoenix, AZ 85004

DIRECTORS NAME	MAILING ADDRESS
Jeffery A. Ballew	401 Edwards St., Ste. 1300, Shreveport, LA 71120
Curt E. Brechtel	400 N. 5th St., 9th Fl., Phoenix, AZ 85004
David L. Hayden	401 Edwards St., Ste. 1300, Shreveport, LA 71120
Matthew J. Reid	400 N. 5th St., 9th Fl., Phoenix, AZ 85004

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the General Manager of the Copper Eagle Gas Storage, LLC (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.

Matthew J. Reid
Signature

10/31/2001
Date

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

Organization Report
File One Copy

Form No. 1

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

RECEIPT

Date 6-6-2002

No. **3116**

Received From Pinnacle West

Address 400 N 5th St. Phoenix AZ 85003

Twenty five and ⁰⁰/₁₀₀ Dollars \$25.00

For filing fee Permit # 912

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

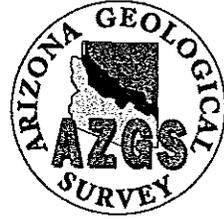
check # 6001112
By SL Rainey



Janet Napolitano
Governor

State of Arizona
Arizona Geological Survey

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



M. Lee Allison
Director and State Geologist

July 6, 2006

Ed Lin
Todd Engineers
2200 Powell Street Ste 225
Emeryville CA 94608

912

Dear Ed:

I have enclosed a CD with the raster log files for the Copper Eagle 1-12 Kakerlee, Copper Eagle 1-19 SunCor, and the Copper Eagle 1-24 SunCor.

Sincerely,

A handwritten signature in cursive script that reads "Steve".

Steven L. Rauzi
Oil & Gas Administrator

Enclosure

Well Log scans (Permit number identifying numbers)

Well ID Depth (ft) Log type Logging company

Copper Eagle wells in the Luke salt area

Copper Eagle 1-24 SunCor sw sw 24-2n-2w, Drilled 2/2002, TD 6053 ft, Permit 909. Top salt 5050 ft. Core: 5373-5377 and 5377-5383 ft

0909BHCS	100-3455	Borehole Compensated Sonic Log	Schlumberger
0909BHCS1	3000-6061	Borehole Compensated Sonic Log	Schlumberger
0909ECS	4100-6060	GPI ECS	Schlumberger
0909ELAN	4100-6050	GPI ELAN	Schlumberger
0909ELAN1	4100-6050	GPI ELAN	Schlumberger
0909FMI	4170-6060	FMI Images (oversized)	Schlumberger
0909IEL	3000-6053	PEX Express Array Induction Log	Schlumberger
0909ML	3000-6003	PEX Micro Cylindrically Focused	Schlumberger
0909MUD	80-6052	Mud Log (1"/100')	Epoch
0909MUD1	80-6052	Mud Log (5"/100')	Epoch
0909NFD	100-3491	PEX Triple Litho-Density-Comp Neutron	Schlumberger
0909NFD1	3000-6003	PEX Triple Litho-Density-Comp Neutron	Schlumberger

Copper Eagle 1-19 SunCor ne ne 19-2n-1w, Drilled 7/2002, TD 8307 ft, Permit 911. Top salt 1846 ft. Core: none

0911LATL	106-8289	PEX High Resolution Laterolog (2"/100')	Schlumberger
0911LATL1	106-8289	PEX High Resolution Laterolog (5"/100')	Schlumberger
0911ML	106-2089	PEX Micro Cylindrically Focused (2"/100')	Schlumberger
0911ML1	106-2089	PEX Micro Cylindrically Focused (5"/100')	Schlumberger
0911MUD	125-8307	Mud Log	Epoch
0911NFD	90-8311	PEX Triple Litho-Density-Comp Neutron (2")	Schlumberger
0911NFD1	90-8311	PEX Triple Litho-Density-Comp Neutron (5")	Schlumberger

Copper Eagle 1-12 Kakerlee ne se 12-2n-2w, Drilled 9/2002, TD 8334 ft, Permit 912. Top salt 5430 ft. Core: 7415-7428 and 7428-7431 ft

0912BHCS	82-3308	Borehole Compensated Sonic Log Gamma Ray	Schlumberger
0912CBL	100-3310	GPI Cement Bond Log from DSST Recr#1	Schlumberger
0912CBL1	0-7120	Segmented Bond Log Cement Map	Baker Hughes
0912CBL2	100-6888	Segmented Bond Log Gamma Ray	Baker Hughes
0912IEL	82-3304	Platform Express Array Induction	Schlumberger
0912IEL1	3308-8342	Platform Express Array Induction	Schlumberger
0912ML	3308-8281	PEX Micro Cylindrically Focused Log	Schlumberger
0912MUD	124-8334	Mud Log	Epoch
0912NFD	82-3298	PEX Triple Litho-Density-Comp Neutron	Schlumberger
0912NFD1	3308-8281	PEX Triple Litho-Density-Comp Neutron	Schlumberger

Arizona State Legislature

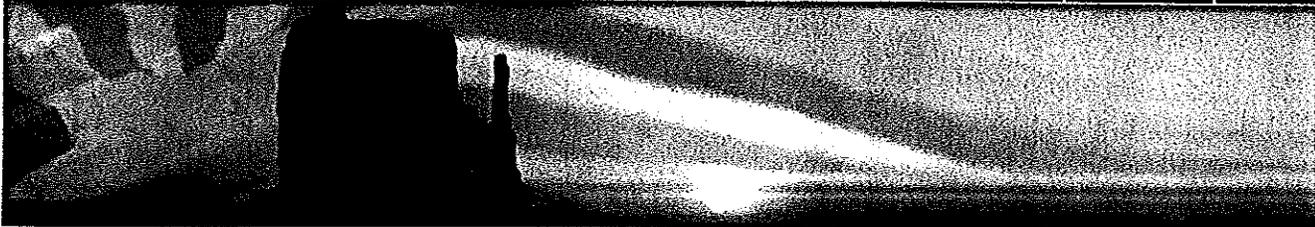
Bill # Search

search

Forty-seventh Legislature - First Regular Session

[change session](#) | [print this document](#) | [site map](#) | [e-mail](#)

Senate	House	Leg. Agencies	Bills	Committees	Statutes	Executive	Calendars	News
--------	-------	---------------	-------	------------	----------	-----------	-----------	------



Senate Engrossed House Bill

State of Arizona
House of Representatives
Forty-sixth Legislature
Second Regular Session
2004

912

CHAPTER 137

HOUSE BILL 2134

AN ACT

AMENDING TITLE 49, ARIZONA REVISED STATUTES, BY ADDING CHAPTER 9; RELATING TO NATURAL GAS STORAGE FACILITIES.

(TEXT OF BILL BEGINS ON NEXT PAGE)

Be it enacted by the Legislature of the State of Arizona:

Section 1. Title 49, Arizona Revised Statutes, is amended by adding chapter 9, to read:

CHAPTER 9

NATURAL GAS STORAGE FACILITIES

ARTICLE 1. GENERAL PROVISIONS

49-1301. Definition

IN THIS CHAPTER, UNLESS THE CONTEXT OTHERWISE REQUIRES, "NATURAL GAS STORAGE FACILITY" MEANS A FACILITY THAT IS EITHER UNDERGROUND OR ABOVE GROUND WITH A CAPACITY OF AT LEAST FIVE HUNDRED THOUSAND CUBIC FEET AND THAT IS USED PRIMARILY FOR THE STORAGE OF NATURAL GAS, EXCLUDING LIQUEFIED NATURAL GAS.

49-1302. Natural gas storage facilities; limitation

A NATURAL GAS STORAGE FACILITY SHALL NOT BE LOCATED WITHIN A COUNTY WITH A POPULATION OF MORE THAN ONE MILLION FIVE HUNDRED THOUSAND PERSONS, IF THE FACILITY IS LOCATED WITHIN NINE MILES OF AN ACTIVE DUTY MILITARY AIR FORCE BASE THAT HAS PILOT TRAINING AS ITS PRIMARY MISSION.

49-1303. Exemption of political subdivisions

THE PROVISIONS OF THIS CHAPTER ARE CUMULATIVE AND SUPPLEMENTAL AND DO NOT APPLY TO A POLITICAL SUBDIVISION THAT BY ORDINANCE OR RESOLUTION HAS ADOPTED PROVISIONS RESTRICTING NATURAL GAS STORAGE FACILITIES THAT ARE AT LEAST AS STRINGENT AS THE RESTRICTIONS IN THIS CHAPTER.

Sec. 2. Findings

The legislature finds that a natural gas storage facility shall not be located within a county with a population of more than one million five hundred thousand persons if the facility is located within nine miles of an active duty military air force base that has pilot training as its primary mission. The legislature also finds that these facilities are presumptively primarily used for activities that are subject to state regulation as provided by 49 United States Code 60104c given the dramatic increase in the number of electrical generating facilities, alternative fuel uses and the population of Arizona.

The legislature further finds that the operation of Luke Air Force Base is essential to the preparation of pilots for the national defense of our country. It is one of the few, if only, sites in the United States where geography, weather, training mission

and accessible bombing ranges provide the best possible training for advanced tactical fighter training. The legislature also finds that a great deal of the economy in central Arizona is built upon, and dependent upon, Luke Air Force Base. The legislature finds that the economy would suffer a significant loss if the missions at Luke Air Force Base were terminated. The legislature additionally finds that the continental base evaluation process under the federal government will look to the protective provisions made to protect military bases. Finally, the legislature finds that in the view of security concerns and safety concerns, a buffer must be established around the perimeter of Luke Air Force Base from certain activities in order to preserve the integrity of the base.

Therefore, the legislature declares that it is essential that certain industrial activities including the storage of high volumes of natural gas be separated from the boundary of Luke Air Force Base in order to remove the terrorist threat and to remove any threat relating to safety. The proposed buffer zone was established through discussions with Luke Air Force Base. The legislature further declares that the restrictions contained in this legislation are meant to apply only to Luke Air Force Base because of the unique circumstances that exist at Luke Air Force Base and are not intended to apply to other locations in Arizona.

Sec. 3. Emergency

This act is an emergency measure that is necessary to preserve the public peace, health or safety and is operative immediately as provided by law.

APPROVED BY THE GOVERNOR APRIL 23, 2004.

FILED IN THE OFFICE OF THE SECRETARY OF STATE APRIL 23, 2004.

BILL STATUS OVERVIEW

HB2134

SPONSORS: NELSON P ARNOLD P HANSON P
 HERSHBERGER P HUBBS P JAYNE P
 LOREDO P BLENDU P BURTON CAHILL C
 GALLARDO C GRAY L. C MIRANDA B C
 PREZELSKI C STUMP C BENNETT C

TITLE: natural gas storage facilities; restrictions
 HOUSE FIRST READ: 02/10/04
 COMMITTEES: ASSIGNED COMMITTEES ACTION
 02/10/04 ENV 02/16/04 W/D
 02/10/04 UTIL&MUN 02/18/04 (4-3-2-0-0) DPA
 02/10/04 NRA 03/12/04 (8-1-0-3-0) DPA
 02/10/04 RULES 03/15/04 (7-0-0-5-0) C&P
 SECOND READ: 02/11/04
 MAJORITY CAUCUS: 03/15/04 Y
 MINORITY CAUCUS: 03/15/04 Y
 COW ACTION: 03/15/04 ACTION: DPA
 AMENDMENTS
 NRA passed
 Util & Mun w/d
 THIRD READ: DATE AYES NAYS NV EXC EMER AMEND RFE 2/3 Vote RESULT
 03/15/04 50 8 2 0 0 Y
 TRANSMIT TO SENATE: 03/16/04
 SENATE FIRST READ: 03/16/04
 SECOND READ: 03/16/04
 COMMITTEES: ASSIGNED COMMITTEES ACTION
 03/18/04 NRT 03/30/04 (7-0-0-0) DP
 03/18/04 RULES 04/05/04 PFCA
 MAJORITY CAUCUS: 04/06/04 Y
 MINORITY CAUCUS: 04/06/04 Y
 COW ACTION: 04/12/04 ACTION: DPA
 AMENDMENTS
 Amended by RULES - adopted
 THIRD READ: DATE AYES NAYS NV EXC EMER AMEND RFE 2/3 Vote RESULT
 04/13/04 30 0 0 0 0 Y
 TRANSMIT TO HOUSE: 04/13/04
 MAJORITY CAUCUS: 04/14/04 Y
 MINORITY CAUCUS: 04/14/04 Y
 Concurrence recommended
 HOUSE CONCURRENCE: DATE AYES NAYS NV EXC
 04/19/04 0 0 0 0
 HOUSE FINAL READ: DATE AYES NAYS NV EXC EMER RFE 2/3 VOTE RESULT
 04/19/04 52 3 5 0 E
 TRANSMITTED TO: GOVERNOR 04/19/04
 ACTION: SIGNED 04/23/04
 CHAPTER: 137 E
 CHAPTERED VERSION: Senate Engrossed Version

912

azcentral.com

\$1,000 Shopping Spree at KB Home Studio

KB HOME

NEWS SPORTS MONEY ENTERTAINMENT FAMILIES HEALTH FOOD & HOME YES TRAVEL SHOP ESPANOL

news

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type

- World & Nation the buzz
- Weather
- Education
- Traffic Info
- Local News
 - Ahwatukee
 - Chandler
 - Gilbert
 - Glendale/Peoria
 - Mesa
 - Phoenix
 - Scottsdale
 - Sun Cities
 - SW Valley
 - Tempe
 - iExtra!
- Photo Galleries
- Video Gallery
- News Multimedia
- Police Scanners
- Web Cams
- Editorials/Op-Ed
 - Benson Cartoons
 - Columnists
 - Plugged In
- Politics 2004
 - Presidential
 - The Primaries
 - Local elections
 - Register to vote
- Arizona Republic
 - Print Edition
 - Front Pages
- Obituaries
- E-mail Newsletters
- Space.com
- Special Reports
- Border Issues
- Famous in AZ
- AP en Español
 - Estados Unidos
 - Política
 - Latinoamérica
 - Internacional

Senate signals approval to bills to protect Luke Air Force Base

Associated Press Apr. 12, 2004 05:46 PM

The full Arizona Senate signaled its approval Monday of two proposals intended to help protect Luke Air Force Base from possible closure.

State officials are working to protect Luke from urban encroachment and keep the base and other major military installations open.

They worry that the military will close the base west of Phoenix - and take away its thousands of jobs - if its mission of training F-16 pilots is compromised.

One bill (HB2134) would prohibit El Paso Corp. from building an underground natural gas storage facility near Luke, a major pilot training base located in Glendale.

The business initially opposed the bill because it planned a massive storage facility in salt domes to help meet growing demand for gas in Arizona. It has since dropped its opposition.

The other bill (HB2141) would extend land-use restrictions that already apply to military air bases in Arizona to a Luke auxiliary field used for instrument approaches.

After Monday's preliminary vote, the proposals now move to final votes in the Senate. Both bills cleared the House last month.

On the Net:

Arizona Legislature: http://www.azleg.state.az.us

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type

advertisement

THE SPEND EVEN LESS GO EVEN FARTHER SALES EVENT!

ISUZU

Click for details

usa today news

- Screening of detainees key issue
- U.S. broadens rules for overtime
- Hard at work in Iraq, Bechtel revenue up 40%
- Labor sees unknown quantity in US Airways' Lakefield
- USA TODAY editor resigns after reporter's misdeeds

today's snapshot

Are e-mail thank you notes OK?

news as it happens

- Iraq suicide attacks kill 68; children burned to death
- FBI raids Deer Valley school district; reasons remain a mystery
- Land sales for preserves halted
- 4 bodies found in rubble after tornadoes rake Midwest
- Greenspan: Recovery on track, interest rates to rise
- Car bomb kills 9 at Saudi security headquarters
- N. Korea's Kim pledges to pursue 'weapon-free goal'
- Russian spacecraft docks with space station
- Israel raids Gaza Strip town, battle gunmen, kill 7
- Man who found slain student says it was like looking for own daughter
- Israeli nuclear whistleblower freed after 18-year prison term
- Medical helicopter crashes, leaving heart patient dead
- Family files lawsuit against maker of drug patch after woman dies
- Mice created without genetic fathers, a first for mammals
- Man bites off chunk of officer's ear
- More breaking news >>

Classified

- autos
- CareerBuilder
- homes | rentals
- stuff
- sell your car
- personals
- place an ad
- more >>

find it fast

- site map
- help
- phone book
- maps
- schools

shopping center

- coupons
- newspaper ads
- tickets

HAWAII.COM

Your Click-it to Paradise

UNBEATABLE TRAVEL DEALS TO HAWAII

Research, locate and contact a dealer in your area who has the car you want.

Click here now

cars.com

FREE Pre-Approval

NRG

Search for PHOENIX area homes in the MLS.

Could your health be in the RED?

912

All

Advanced search, tips

WIN

Arizona Lottery

THE ARIZONA REPUBLIC
ONLINE PRINT EDITION

FRONT PAGE LOCAL SPORTS BUSINESS ARIZONA NEWS OPINIONS

April 5, 2004

WEST VALLEY online print edition

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type

Sunday Sections

- A&E
- CareerBuilder
- Travel & Explore
- Viewpoints

Weekly Features

- Food & Drink
- Your Home
- Movie Preview
- Wheels
- Yes

Communities

- Ahwatukee
- Chandler
- Gilbert
- Mesa
- Scottsdale
- Tempe
- North/Central Phoenix
- Northeast Phoenix
- Central/South Phoenix
- Glendale / Peoria
- Southwest Valley
- Sun Cities / Surprise

7-Day Archive

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Advanced search, tips

Legislature hits its target in protecting Luke AFB

3 bills are the right way to go

Apr. 3, 2004 12:00 AM

There was never a shred of doubt.

It was done with the precision of a smart bomb even though the Legislature is better known for its clumsy and convoluted ways of dealing with important matters than it is for clarity and resolve.

But this week the Senate Natural Resources and Transportation Committee and its chairwoman, Sen. Linda Binder of Lake Havasu City, resolutely dispatched three bills that are designed to put in place a few more protections for Luke Air Force Base.

The unanimous votes were another sign that Luke and the rest of the state's military installations are on legislative radar screens like never before. It's an extremely encouraging sign because lawmakers realize the tremendous stakes involved were Luke or one of Arizona's other major bases recommended for mothballs. The bases, which collectively pump \$5.6 billion into Arizona's economy annually, once again must prove their worth to the Base Realignment and Closure Commission because the Department of Defense wants to close or realign about 25 percent of the nation's military bases in 2005.

West Valley cities, Luke, the Maricopa County Board of Supervisors and landowners have led the fight to stop El Paso Gas Corp. from storing 10 billion cubic feet of natural gas in underground salt caverns on land it owns adjacent to Luke. Rep. John Nelson's legislation, House Bill 2134, to prohibit the storage of natural gas within nine miles of the base sailed through Binder's committee, its first stop in the Senate after passing the House on a lopsided 50-8 vote.

Peter Jaskoski, the state government affairs director for El Paso from Houston, acknowledged the strong opposition to its proposed Copper Eagle project, but said its customers were lost in the debate and a storage facility is still needed. He said it was never El Paso's intention to jeopardize the safety and security of Luke or West Valley communities.

El Paso wants it both ways. It says the safety and security of Luke are of "paramount importance," but it won't publicly abandon its plans to store natural gas next to Luke - a proposal that easily could be the death of Luke in the BRAC deliberations.

Sen. Robert Blendu, R-Litchfield Park, picked up on that. He said the Legislature's concern is protecting the base; natural gas storage is farther down the list. If El Paso were to go ahead and file papers with the Federal Energy Regulatory Commission and circumvent the intent of lawmakers, Blendu said it would be "a bit discouraging."

Pardon us, senator, but you're much too kind. Action by El Paso to proceed in the face of community outrage would be an in-your-face assault against the residents of the West Valley. We hope it doesn't come down to any sort of unilateral action, and that El Paso looks elsewhere for a storage facility.

Two other bills also should help solidify the case that Arizona is working in partnership to protect its bases. One measure, HB 2141, would impose noise contours and accident potential zones around Luke's Auxiliary Airfield One to halt the kind of residential encroachment that's threatened Luke. Pilots of F-16 fighters use the field, northwest of Surprise, for instrument training at altitudes as low as 150 feet above the ground. The other measure, HB 2662, would require the Land Department and the state Real Estate Department

Classified

- autos
- business
- CareerBuilder
- personals
- real estate
- rentals
- services
- stuff

find @ fast

- weather
- obituaries
- lottery
- site map
- help
- contact us
- about us
- republic store

shopping center

- coupons
- newspaper ads
- tickets

Steve Benson

See what The Arizona Republic's Pulitzer Prize-winning cartoonist has drawn up lately.



Letters to the editor

Send a letter to the editor via our e-mail form.

A virtual town hall

Speak your mind about politics, local issues or virtually any topic on the message boards.

912

to maintain maps that show military training routes.

This is the kind of sharp focus that our military bases need. The more protections that lawmakers enact, the better the chance that these economic engines will survive the next round of base closings.

[Print This](#) | [Email This](#) | [Most Popular](#) | [Subscribe](#) | [Larger Type](#) | [Smaller Type](#)

azcentral.com - [News](#) • [Sports](#) • [Money](#) • [Entertainment](#) • [Style](#) • [Travel](#) • [Health](#) • [Food & Home](#) • [Shop](#)
12 News - [News](#) • [Weather](#) • [What's on 12](#) • [About 12](#) • [12 News Bios](#) • [12 News Today](#) • [Jobs at KPNX](#)

[front page](#) | [local](#) | [sports](#) | [business](#) | [arizona living](#) | [opinions](#)
[a&e](#) | [careerbuilder](#) | [travel & explore](#) | [viewpoints](#) | [house & home](#) | [food & drink](#) | [wheels](#) |

[site map](#) | [azcentral.com main](#) | [news](#) | [sports](#) | [money](#) | [entertainment](#) | [style](#) | [travel](#) | [health](#)
[families](#) | [food & home](#) | [shop](#) | [español](#) | [classifieds](#) | [weather](#) | [maps](#)

[customer service](#) | [terms of service](#) | [contact The Republic](#) | [subscribe to The Arizona Republic](#)
[Newspapers In Education](#) | [The Republic in your community](#) | [about The Republic](#) | [about KPNX-TV](#) | [The News Store](#)

Copyright 2004, azcentral.com. All rights reserved.
[USA Today](#) | [Gannett Co. Inc.](#) | [Gannett Foundation](#) | [Real Cities Network](#)



Student Loan Consolidation - If you have \$10,000 or more in student loan debt and have started student loan repayment or are in your grace period, you may qualify for the Federal Student Consolidation Loan. Consolidation can save you up to 54% a month and could possibly lower your interest rate to 1.6%. [Click here for more info](#)

NEWS SPORTS MONEY ENTERTAINMENT FAMILIES HEALTH FOOD & HOME YES TRAVEL SHOP ESPANOL

news

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type

- World & Nation**
- the buzz**
- Weather**
- Education**
- Traffic Info**
- Local News**
- Ahwatukee
- Chandler
- Gilbert
- Glendale/Peoria
- Mesa
- Phoenix (NE)
- Phoenix (North)
- Phoenix (South)
- Scottsdale
- Sun Cities
- SW Valley
- Tempe
- Photo Galleries**
- Video Gallery**
- News Multimedia**
- Police Scanners**
- Web Cams**
- Editorials/Op-Ed**
- Benson Cartoons
- Columnists
- Plugged In
- Politics 2004**
- Presidential
- The Primaries
- Local elections
- Register to vote
- Arizona Republic**
- Print Edition
- Front Pages
- Obituaries**
- E-mail Newsletters**
- Space.com**
- Special Reports**
- Border Issues**
- Famous In AZ**
- AP en Español**
- Estados Unidos
- Política
- Latinoamérica
- Internacional

Senate committee backs bills to protect Luke

Associated Press
Mar. 30, 2004 03:54 PM

Two bills intended to help protect Luke Air Force Base from possible closure sailed through a Senate committee Tuesday.

One bill (HB2134) approved by the Committee on Natural Resources and Transportation would prohibit El Paso Corp. from building an underground natural gas storage facility near Luke, a major pilot training base located in Glendale.

The other bill (HB2141) would extend land-use restrictions that already apply to military air bases in Arizona to a Luke auxiliary field used for instrument approaches.

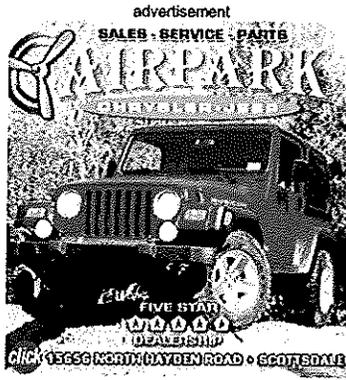
Both bills go to the full Senate following a Rules Committee review.

On the Net:

Arizona Legislature: <http://www.azleg.state.az.us>

El Paso Corp.: <http://www.elpaso.com>

Luke Air Force Base: <http://www.luke.af.mil/public.htm>



Classified

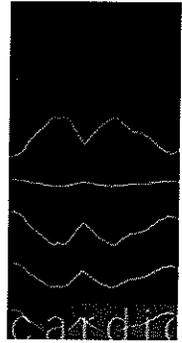
- autos
- CareerBuilder
- homes | rentals
- stuff
- sell your car
- place an ad
- more »

find @ fast

- site map
- help
- phone book
- maps
- schools

shopping center

- coupons
- newspaper ads
- tickets



912

usa today news

- Tough questions teed up for Rice testimony
- Mass. attorney general refuses to seek stay of gay marriages
- Continuing search finds no weapons of mass destruction
- Major cause of joblessness lies within U.S. schools
- Binge drinking most common in upper Midwest, least in South

today's snapshot

What is the average annual cost for auto insurance?

news as it happens

- Jubilant Iraqis abuse bodies; bomb kills 5 GIs
- Webber wildfire now half contained
- Panel to question Rice on Bush's pre-Sept. 11 policies
- Phoenix, Tempe are latest to embrace Chavez holiday
- Study: People pick purebred dogs that look like 'em
- OPEC cuts likely to increase oil prices
- 30 detained after Uzbek terror attacks
- Woman who stoned children was legally insane, psychiatrist says
- U.S. violated rights of 51 Mexicans on death row, World Court says
- Latest NATO members ready for new threats, challenges
- Baby formula recalled because of scoop mistake
- Rape crisis official says more cases loom at university
- Muslims generally violent, seek to overthrow West, article says
- Suicide bomber recruit, 15, promised 72 virgins
- Jackson grand jury heard from accuser

• More breaking news >>

EARNIADOT

NRG
Nations, Risco's & Gonzalez P.L.C.

Search for PHOENIX area homes in the **MLS**. *realtor*

Reduce the Risk of Type 2 Diabetes

AMERICAN MORTGAGE SPECIALISTS

All

• Advanced search, tips

WIN

A FREE TRIP TO PHOENIX

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type

Search for Phoenix area homes in the MLS			zillow
City	Bed / Bath	Sq. Ft.	
Phoenix	3bd 2ba	1300	Go

azcentral.com

Email this article
Print this article
Most popular pages

Click to send
Click to print
Today | This Week

Ensuring the future

Bill banning gas storage in caverns needed despite APS decision

Mar. 27, 2004 12:00 AM

On Tuesday afternoon in a state Senate committee, there is good reason to believe that legislation to prohibit the storage of natural gas in underground salt caverns in the West Valley will pass handily.

It should, now that the state's largest utility - Arizona Public Service Co. - has withdrawn its opposition to Rep. John Nelson's bill, which a week ago zoomed out of the Arizona House on a lopsided 50-8 vote.

The House vote was a sign of the breadth and depth of the opponents to El Paso Natural Gas Corp. and its proposed Copper Eagle facility, which would store 10 billion cubic feet of natural gas a stone's throw from Luke Air Force Base.

APS and El Paso had urged the defeat of Nelson's bill, insisting that Arizona needs reliable supplies of natural gas to meet its growth projections.

The state does, but this proposal ran counter to safety and security concerns. Ever since the idea was first vetted, the opponents said they weren't trying to undermine attempts to increase supplies of natural gas, only that the salt caverns were in the wrong location. Other salt caverns far from populated areas might work, they said, and other companies were exploring pipeline projects to bring more natural gas into Arizona.

The APS retreat represents a victory for the West Valley, Luke and the nearby landowners who would see the value of their land plummet if gas were stored underground. All West Valley cities and the Maricopa County Board of Supervisors had passed resolutions opposing El Paso's proposal. In an unusual offensive, the Luke brass went on the record and said they also had safety and security concerns.

It was a noble united front with a clear and passionate message: Stop El Paso's proposal. While El Paso, too, withdrew its opposition to Nelson's legislation, House Bill 2134, the West Valley isn't out of danger. El Paso still could petition the Federal Energy Regulatory Commission for its proposed Copper Eagle storage facility even if Nelson's bill becomes law. We would hope El Paso would scrap its plan and heed the wishes of the West Valley.

Sen. Linda Binder, R-Lake Havasu City, chairwoman of the Natural Resources and Transportation Committee, has agreed to hold informal hearings to seek solutions to natural gas storage and pipeline problems. There are legitimate needs. New power plants and others under construction will require dependable supplies.

"This is looking into the future," says Marty Shultz, a vice president of Pinnacle West Capital Corp., the parent company of APS.

APS found itself in an uncomfortable situation, at odds with the entire West Valley and Luke. On more than one occasion APS said that if it came down to a decision between El Paso and Luke, it would side with Luke, an economic engine for the region. Gas storage under Luke could have been the nail in the coffin for Luke in the next round of base closings and realignment next year.

The retreat by the utilities does not mean Nelson's bill is superfluous. Glendale Mayor Elaine Scruggs says, "We in the West Valley still need that protection."

Consider Nelson's bill an insurance policy for the future. Sen. Binder's committee should embrace it Tuesday, readying it for a Senate vote and signing by Gov. Janet Napolitano.

This is the kind of community support that could make a difference to the Base Realignment and Closure Commission deliberations when it must recommend which of the nation's military bases ought to be closed.

The mission is not yet accomplished.

Email this article
Print this article
Most popular pages

Click to send
Click to print
Today | This Week

912

	Search for Phoenix area homes in the MLS			
City	Bed / Bath	Sq. Ft.		
Phoenix	3bd 2ba	1300	Go	

azcentral.com

[Email this article](#)
[Print this article](#)
[Most popular pages](#)

[Click to send](#)
[Click to print](#)
[Today | This Week](#)

912

Time to withdraw natural gas storage proposal

Mar. 26, 2004 12:00 AM

Time to withdraw natural-gas storage proposal

It's good that Arizona Public Service Co. and El Paso Natural Gas Corp. have withdrawn their opposition to legislation sponsored by Rep. John Nelson. But it's only a small step. Nelson's bill to ban the storage of natural gas in underground salt caverns near Luke Air Force Base was prompted by El Paso's proposal to store nearly 10 billion cubic feet of gas. West Valley cities, Maricopa County and Luke all have cited legitimate security and safety fears - not to mention the possible death knell for Luke in the next round of base closings - were the Copper Eagle storage facility built. Nelson's bill is still necessary to keep compiling the record against the storage. Regrettably, El Paso is mum on whether it'll seek approval for its storage project with the Federal Energy Regulatory Commission, a body that trumps state law. El Paso should listen to the people and cancel its project.

- EDITORIAL BOARD

[Email this article](#)
[Print this article](#)
[Most popular pages](#)

[Click to send](#)
[Click to print](#)
[Today | This Week](#)

Sopranos and get **\$20 CASH BACK!** Premieres Sunday
Mar. 7 9pm ET/PT

azcentral.com

Email this article
Print this article
Most popular pages

Click to send
Click to print
Today | This Week

912

Luke backers win twice in fight over gas facility

David Madrid
The Arizona Republic
Mar. 16, 2004 12:00 AM

A rally by West Valley mayors, council members, firefighters, residents and other Luke Air Force Base defenders was held at the state Capitol on Monday to stop a natural-gas storage facility from being built near Luke. Their efforts bore fruit later in the day on two fronts.

A bill championed by Luke supporters, House Bill 2134, passed a vote of the entire House, 50-8. The bill, which seeks to stop the facility from being built near Luke, now goes to the Senate for consideration.

The protesters were also trying to stop a measure sponsored by Natural Resources and Agriculture Committee Chairman Chuck Gray, R-Mesa, that would have allowed El Paso Natural Gas Co. to pursue Federal Energy Regulatory Commission approval for the facility.

The proposed complex would initially hold 9.6 billion cubic feet of natural gas in three large salt caverns.

The 70 to 100 protesters got what they wanted when Gray's HB 2389 died in the Rules Committee on a 4-4 tie vote along party lines, Democrats voting against the bill and Republicans for it.

Luke proponents say the facility's location, across the street from base housing and a school and within a mile of the base's runways and its hospital, would be a safety risk and would endanger the base in 2005, when a quarter of the country's military installations will be chosen for closure.

El Paso and Pinnacle West Capital Corp. argue that the salt dome near Luke is the only place the facility can be safely built. Advocates for the facility have also said it would help alleviate price spikes in the event of a future natural-gas shortage.

Glendale Mayor Elaine Scruggs said the rally helped Luke's cause because base supporters met face to face with legislators who were not fully aware of the issues surrounding the controversy.

"Just about everybody had some general knowledge of the legislation in terms of specifics, but a lot of them didn't understand all the aspects of the proposed facility," Scruggs said. "They were not aware that there are numerous alternatives in other parts of the state. Certainly, they weren't all aware that as a public-safety issue, this goes beyond Luke Air Force Base."

Protesters against the facility were joined by Phoenix Mayor Phil Gordon and Councilman Claude Mattox.

"Luke Air Force Base is one of the biggest economic engines we have," Gordon said. "Protecting that asset, while it may be located on the west side, is critical to the success of the entire Valley."

March 15, 2004

LOCAL online print edition

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type

Sunday Sections

- A&E
- CareerBuilder
- Travel & Explore
- Viewpoints

Weekly Features

- Food & Drink
- Your Home
- Movie Preview
- Wheels
- Yes

Communities

- Ahwatukee
- Chandler
- Gilbert
- Mesa
- Scottsdale
- Tempe
- North/Central Phoenix
- Northeast Phoenix
- Central/South Phoenix
- Glendale / Peoria
- Southwest Valley
- Sun Cities / Surprise

7-Day Archive

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Bills clash on Luke, gas storage

David Madrid
The Arizona Republic
Mar. 13, 2004 12:00 AM

A bill that would prevent a huge natural-gas storage facility from being built next to Luke Air Force Base has competition from another measure that would pretty much do the opposite.

House Bill 2134 would prevent the use of three salt caverns next to the base to hold 9.6 billion cubic feet of natural gas. It cleared the Natural Resources and Agriculture Committee by an 8-1 vote Friday.

But Chairman Chuck Gray, R-Mesa, got a bill through his committee that would allow El Paso Natural Gas Co. to win approval for the facility from the Federal Energy Regulatory Commission while preventing the storage of gas there until after a quarter of the nation's military bases are chosen for closure. House Bill 2389 was approved 5-4.

Gray said that preventing El Paso from using its land to store gas would amount to a private-property taking.

He dismissed arguments against the facility by West Valley cities, the Maricopa County Board of Supervisors, landowners near the base and Luke as being unsubstantiated.

Rep. John Nelson, R-Glendale, a sponsor of the bill to stop the facility, said landowners don't have unlimited property rights. "If you buy it (land) and don't do the due diligence you need on it, then you are making assumptions and you pay the price for that," Nelson said.



azcentral

- Bill to publish DUI names moves along
- Diana Ross contends she's served jail time already
- 5-day moratorium on lion hunt being considered
- Prison ideas are weighed by officials
- Officer shot in traffic stop in Glendale; 3 are arrested
- 200 will vie in Mesa for shuffleboard title
- Spring break at Havasu: 'Everybody lets loose'
- Game commission to consider moratorium on lion shootings
- Mtn. View wins academic decathlon
- Expert to talk about signs of dementia
- MCC film festival tries to clear air about Iran
- 'Da Vinci' book inspires talk about codes
- Councilman's foe appeals court order

• Click for more News

Classified

- autos
- business
- CareerBuilder
- personals
- real estate
- rentals
- services
- stuff

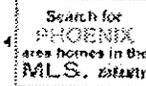
912

find @ azcentral

- weather
- obituaries
- lottery
- site map
- help
- contact us
- about us
- republic store

shopping center

- coupons
- newspaper ads
- tickets



Tired of YO-YO dieting?

SEARCH TIPS

Advanced search, tips

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type

azcentral.com • News • Sports • Money • Entertainment • Style • Travel • Health • Food & Home • Shop

12 News • News • Weather • What's on 12 • About 12 • 12 News Bios • 12 News Today • Jobs at KPXX



front page | local | sports | business | arizona living | opinions
 a&e | careerbuilder | travel & explore | viewpoints | house & home | food & drink | wheels |
 site map | azcentral.com main | news | sports | money | entertainment | style | travel | health
 families | food & home | shop | español | classifieds | weather | maps

customer service | terms of service | contact The Republic | subscribe to The Arizona Republic
 Newspapers In Education | The Republic in your community | about The Republic | about KPXX-TV | The News Store

Copyright 2004, azcentral.com. All rights reserved.
 USA Today | Gannett Co. Inc. | Gannett Foundation | Real Cities Network



Classified

- autos
- business
- CareerBuilder
- personals
- real estate
- rentals
- services
- stuff

find@fast

- weather
- obituaries
- lottery
- site map
- help
- contact us
- about us
- republic store

912

shopping center

- coupons
- newspaper ads
- tickets

EARNHARDT

NRS

Search for PHOENIX area homes in the M.L.S. database

Tired of YO-YO dieting?

March 15, 2004

LOCAL online print edition

- Sunday Sections
- A&E
 - CareerBuilder
 - Travel & Explore
 - Viewpoints

- Weekly Features
- Food & Drink
 - Your Home
 - Movie Preview
 - Wheels
 - Yes

- Communities
- Ahwatukee
 - Chandler
 - Gilbert
 - Scottsdale
 - Tempe
 - North/Central Phoenix
 - Northeast Phoenix
 - Central/South Phoenix
 - Glendale / Peoria
 - Southwest Valley
 - Sun Cities / Surprise

- 7-Day Archive
- Sunday
 - Monday
 - Tuesday
 - Wednesday
 - Thursday
 - Friday
 - Saturday

Advanced search, tips



\$1,000 Shopping Spree at KB Home Studio

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type

Gas-storage bill to be heard

Measure would ban use of 3 salt caverns near Luke

David Madrid
The Arizona Republic
Mar. 12, 2004 12:00 AM

A bill that Luke Air Force Base protectors hope will prevent a natural-gas storage facility from being built near the base will be heard at 9 a.m. today in a legislative committee in the state House of Representatives.

House Bill 2134 has been held by the committee chairman, Rep. Chuck Gray, R-Mesa. Without a hearing, the bill will die. After several meetings among lobbyists, the base, House Speaker Jake Flake, Gray and the bill's sponsor, Rep. John Nelson, Gray agreed to hear the measure.

The bill would prevent a natural-gas storage facility from being built within a nine-mile radius of Luke. El Paso Natural Gas Co. wants to store 9.6 billion cubic feet of natural gas in three mammoth salt caverns within a mile of Luke, its hospital, base housing and a school.

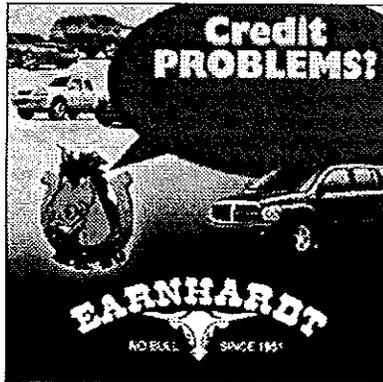
Opposed to the location are the base, all the cities in the West Valley, the Maricopa County Board of Supervisors, the Sun City communities and Westmarc, a western Maricopa County community leadership group. Those opponents say the storage facility could threaten Luke when a quarter of the nation's military bases are chosen for closure in 2005. They also question the safety of the facility and the natural-gas pipeline to it.

Proponents argue that the salt dome near Luke is the only place in the state where such a large amount of natural gas can be safely stored.

They say the facility would provide a dependable supply of natural gas, preventing price spikes.

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type

azcentral.com - News • Sports • Money • Entertainment • Style • Travel • Health • Food & Home • Shop
 12 News - News • Weather • What's on 12 • About 12 • 12 News Bios • 12 News Today • Jobs at KPNX



advertisement

azcentral.com

- Bill to publish DUI names moves along
- Diana Ross contends she's served jail time already
- 5-day moratorium on lion hunt being considered
- Prison ideas are weighed by officials
- Officer shot in traffic stop in Glendale; 3 are arrested
- 200 will vie in Mesa for shuffleboard title
- Spring break at Havasu: 'Everybody lets loose'
- Game commission to consider moratorium on lion shootings
- Mtn. View wins academic decathlon
- Expert to talk about signs of dementia
- MCC film festival tries to clear air about Iran
- 'Da Vinci' book inspires talk about codes
- Councilman's foe appeals court order

Click for more News

front page | local | sports | business | arizona living | opinions
 a&e | careerbuilder | travel & explore | viewpoints | house & home | food & drink | wheels |
 site map | azcentral.com main | news | sports | money | entertainment | style | travel | health
 families | food & home | shop | español | classifieds | weather | maps

customer service | terms of service | contact The Republic | subscribe to The Arizona Republic
 Newspapers In Education | The Republic in your community | about The Republic | about KPNX-TV | The News Store

Copyright 2004, azcentral.com. All rights reserved.
 USA Today | Gannett Co. Inc. | Gannett Foundation | Real Cities Network

Subject: HB 2134 - Luke salt deposit

From: "Larry Fellows" <larry.fellows@azgs.az.gov>

Date: Mon, 01 Mar 2004 09:35:00 -0700

To: Chuck Gray <cdgray@azleg.state.az.us>

CC: Kathi Knox <kknox@azleg.state.az.us>, Jake Flake <jflake@azleg.state.az.us>

9/12

Representative Gray:

The salt deposit near Luke AFB is an extremely valuable, known resource that could handle large underground storage facilities. The Arizona Geological Survey recently released a report that describes known and potential salt deposits in Arizona (Circular 30, "Arizona Has Salt!"). Steve Rauzi, an experienced petroleum geologist on our staff, is the author. You may have seen maps from this report. These maps could easily give one the false impression that salt deposits are extremely common in Arizona. Salt is KNOWN in only nine areas of the State, but the distribution of the salt within those areas is not known. More is known about the salt near Luke than in any of the other 8 areas. Our Map 36, which Steve also prepared, shows the distribution and depth to the top of the Luke salt. If you haven't seen Circular 30 or Map 36, please let me know.

Eighteen areas in Arizona have POTENTIAL for salt to be present. This conclusion is based only on indirect evidence. Some of the areas have never been drilled and the subsurface geology is unknown. Steve identified these areas to encourage further exploration and, hopefully, discovery of a valuable resource.

Natural gas is routinely stored in salt caverns and natural gas pipelines cross the country.

If you'd like more information about Arizona's salt deposits, we will gladly provide it.

--

Larry D. Fellows
Director and State Geologist
Arizona Geological Survey
Larry.Fellows@azgs.az.gov
520-770-3500



- autos
- business
- CareerBuilder
- personals
- real estate
- rentals
- services
- stuff

March 1, 2004

LOCAL online print edition

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type

Sunday Sections

- A&E
- CareerBuilder
- Travel & Explore
- Viewpoints

Weekly Features

- Food & Drink
- Your Home
- Movie Preview
- Wheels
- Yes

Communities

- Ahwatukee
- Chandler
- Gilbert
- Mesa
- Scottsdale
- Tempe
- North/Central Phoenix
- Northeast Phoenix
- Central/South Phoenix
- Glendale / Peoria
- Southwest Valley
- Sun Cities / Surprise

7-Day Archive

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Advanced search, tips

\$1,000 Shopping Spree at KB Home Studio

WIN A FREE TRIP

Bill to bar gas storage near Luke on hold

David Madrid
The Arizona Republic
Feb. 28, 2004 12:00 AM

A legislative bill that would prevent a natural-gas storage facility from being built within a nine-mile radius of Luke Air Force Base is in a holding pattern for at least another week as opposing sides negotiate.

Rep. Chuck Gray, R-Mesa, who was recently appointed as a committee chairman, has refused to hear House Bill 2134. House Speaker Jake Flake has appointed a small committee to work things out.

The bill's sponsor, Rep. John Nelson, R-Glendale, has agreed to amend the measure so it is specific to Luke.

El Paso Natural Gas Co. wants to store 9.6 billion cubic feet of natural gas near Luke in three mammoth salt caverns. A 35-mile-long, 36-inch pipeline would likely cross the base's southern departure corridor (where armed flights take off), skirt the base to the west and north and end at the storage facility on the east.

Gray said Friday he hadn't decided to kill the bill, but if it died and was determined to be needed, the issue could be revived.

He said he supports Luke but that the bill has problems, such as not accounting for property rights, population growth and inadequate natural-gas storage capacity and infrastructure in the state.

"It (the bill) doesn't address the issue of this is probably the best salt-dome formation in the state that could handle this kind of a storage facility," he said. "It also doesn't really address whether Luke's on the (base-closure) commission list or not, and we have to investigate how that plays out."

Nelson said West Valley cities and the base don't want the facility near Luke, so he isn't giving up on his bill.

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type

azcentral.com - News • Sports • Money • Entertainment • Style • Travel • Health • Food & Home • Shop
12 News - News • Weather • What's on 12 • About 12 • 12 News Bios • 12 News Today • Jobs at KPNX

advertisement

Buy Your Groceries At Bashas' & Earn FREE Chevron Gas!

azcentral.com

- Dems fail to entice Latino voters
 - Dysart scurries to fill positions
 - New game reminds kids about their treatments
 - Corrections training scrutinized
 - Electronic-monitoring of probationers out with budget cuts
 - Independent investigator yet to be OK'd by county
 - Boys, girls club caught in feud
 - Jesus statue gains following in Scottsdale
 - Law school is proposed for downtown
 - Parent-teen discussions to be focus
 - Discussions scheduled on Dial-A-Ride issues
 - Gilbert set to sue over toxic waste
- Click for more News

find @ fast

- weather
- obituaries
- lottery
- site map
- help
- contact us
- about us
- republic store

shopping center

- coupons
- newspaper ads
- tickets

Search for PHOENIX area homes in the M.L.S. market

Could your health be in the RED?

912

front page | local | sports | business | arizona living | opinions
a&e | careerbuilder | travel & explore | viewpoints | house & home | food & drink | wheels |

site map | azcentral.com main | news | sports | money | entertainment | style | travel | health
families | food & home | shop | español | classifieds | weather | maps

customer service | terms of service | contact The Republic | subscribe to The Arizona Republic
Newspapers In Education | The Republic in your community | about The Republic | about KPNX-TV | The News Store

Copyright 2004, azcentral.com. All rights reserved.
USA Today | Gannett Co. Inc. | Gannett Foundation | Real Cities Network

THE ARIZONA REPUBLIC
ONLINE PRINT EDITION

Located just east of 10th Ave. on Bell Rd. just minutes from any location in Phoenix.
Located just east of 10th Ave. on Bell Rd. just minutes from any location in Phoenix.



- Classified**
- autos
 - business
 - CareerBuilder
 - personals
 - real estate
 - rentals
 - services
 - stuff

FRONT PAGE LOCAL SPORTS BUSINESS ARIZONA LIVING OPINIONS SOCIETY & ARTS

March 1, 2004

LOCAL online print edition

- Sunday Sections**
- A&E
 - CareerBuilder
 - Travel & Explore
 - Viewpoints

- Weekly Features**
- Food & Drink
 - Your Home
 - Movie Preview
 - Wheels
 - Yes

- Communities**
- Ahwatukee
 - Chandler
 - Gilbert
 - Mesa
 - Scottsdale
 - Tempe
 - North/Central Phoenix
 - Northeast Phoenix
 - Central/South Phoenix
 - Glendale / Peoria
 - Southwest Valley
 - Sun Cities / Surprise

- 7-Day Archive**
- Sunday
 - Monday
 - Tuesday
 - Wednesday
 - Thursday
 - Friday
 - Saturday

Advanced search, tips

THUNDERBIRD
Executive MBA in International Mgmt.

THUNDERBIRD
Executive MBA in International Mgmt.

casino fun
New from azcentral.com

casino fun
New from azcentral.com

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type | Larger Type | Smaller Type

Bill slowed to bar storage of natural gas near Luke

David Madrid
The Arizona Republic
Feb. 27, 2004 12:00 AM

Legislative efforts to stop a mammoth natural-gas storage facility from being built near Luke Air Force Base have screeched to a halt after an East Valley committee chairman refused to hear the bill.

Supporters are willing to amend House Bill 2134 so that it is specific only to Luke. The refusal of Rep. Chuck Gray, a Mesa Republican, to hear the bill has angered West Valley leaders, who say they will not compromise if it means the El Paso Natural Gas Co. facility will be built near Luke.

They are concerned about safety and they fear the proximity of the facility to the base could hurt when a quarter of the nation's military bases are chosen for closure in 2005.

The Copper Eagle Natural Gas Storage Facility would store 9.6 billion cubic feet of natural gas in three large salt caverns east of the base and would likely have a 35-mile-long, 36-inch pipeline running from the facility to the north and the west of the base and crossing its southern departure corridor, where live-armed flights take off.

Rep. John Nelson, R-Glendale, the prime sponsor of the bill, said that Gray is concerned with the gas company's property rights. Gray could not be reached for comment Thursday.

"A committee chair should represent more than just a small parochial view of the state, and that's what's happening," Nelson said.

County Supervisor Max Wilson said unlimited property rights don't come with purchased land. Zoning must be granted, he said.

"This is just about money and nothing else," Wilson added.

Glendale Mayor Elaine Scruggs said the issue is about preserving human life.

That is also one concern of Luke's commander, Brig. Gen. Philip Breedlove.

advertisement

Buy Your Groceries At Bashas' & Earn FREE Chevron Gas!

Buy Your Groceries At Bashas' & Earn FREE Chevron Gas!

azcentral.com

- Dems fail to entice Latino voters
- Dysart scurries to fill positions
- New game reminds kids about their treatments
- Corrections training scrutinized
- Independent investigator yet to be OK'd by county
- Boys, girls club caught in feud
- HAPPY BIRTHDAY TO YOU!
- Jesus statue gains following in Scottsdale
- Law school is proposed for downtown
- Gilbert set to sue over toxic waste
- Arena-area residents seek traffic solutions
- Parent-teen discussions to be focus
- Discussions scheduled on Dial-A-Ride issues
- Seniors urged to plan for their long-term care
- Woman puts neighbors' safety first

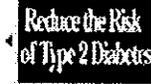
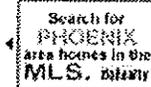
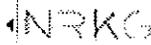
Click for more News

find @ fast

- weather
- obituaries
- lottery
- site map
- help
- contact us
- about us
- republic store

shopping center

- coupons
- newspaper ads
- tickets



912

After meetings with the gas company in early February, Breedlove sent it a letter stating that anything that adversely affects the safety and security of the base's airmen, their families or the base's mission concerns him greatly.

The facility would sit within a mile of Luke, its base housing, hospital and a school.

Martin Shultz, a lobbyist for Pinnacle West Capital Corp. and APS, opposes the bill. He said everyone should focus on reaching a solution because the spot near Luke is the best location for the facility.

"We wouldn't support solutions that compromise Luke," Shultz said. "We're some of its biggest supporters. . . ."

Reach the reporter at david.madrid@arizonarepublic.com or (602) 444-6926.

[Print This](#) | [Email This](#) | [Most Popular](#) | [Subscribe](#) | [Larger Type](#) | [Smaller Type](#) | [Larger Type](#) | [Smaller Type](#)

[azcentral.com](#) - [News](#) • [Sports](#) • [Money](#) • [Entertainment](#) • [Style](#) • [Travel](#) • [Health](#) • [Food & Home](#) • [Shop](#)

12 News - [News](#) • [Weather](#) • [What's on 12](#) • [About 12](#) • [12 News Bios](#) • [12 News Today](#) • [Jobs at KPNX](#)

[front page](#) | [local](#) | [sports](#) | [business](#) | [arizona living](#) | [opinions](#)
[a&e](#) | [careerbuilder](#) | [travel & explore](#) | [viewpoints](#) | [house & home](#) | [food & drink](#) | [wheels](#) |
[site map](#) | [azcentral.com main](#) | [news](#) | [sports](#) | [money](#) | [entertainment](#) | [style](#) | [travel](#) | [health](#)
[families](#) | [food & home](#) | [shop](#) | [español](#) | [classifieds](#) | [weather](#) | [maps](#)

[customer service](#) | [terms of service](#) | [contact The Republic](#) | [subscribe to The Arizona Republic](#)
[Newspapers In Education](#) | [The Republic in your community](#) | [about The Republic](#) | [about KPNX-TV](#) | [The News Store](#)

Copyright 2004, [azcentral.com](#). All rights reserved.
USA Today | [Gannett Co. Inc.](#) | [Gannett Foundation](#) | [Real Cities Network](#)

Search for Phoenix area homes in the MLS zipRealty

City	Bed / Bath	Sq. Ft.	
Phoenix	3bd 2ba	1300	Go



Email this article
 Print this article
 Most popular pages

Click to send
 Click to print
 Today | This Week

Unnatural proposal

Storing natural gas near Luke base is a bad idea

Feb. 21, 2004 12:00 AM

El Paso Natural Gas Co. wants to store huge amounts of natural gas in vast underground salt caverns on the Valley's west side. Just about everybody who lives or works in the area thinks it's a bad idea.

It would be wrong to dismiss the opposition as NIMBY-ism run amok. This is a united coalition that includes cities across the West Valley, the Maricopa County Board of Supervisors, Luke Air Force Base, landowners and state lawmakers.

They believe the proposed storage facility would:

- Pose too great a safety risk in an urban environment.
- Jeopardize Luke's mission as the nation's premier training facility for F-16 fighter pilots at a time when Luke faces the next round of base closings.

Within this Iron Curtain of Resistance there's a tacit understanding that there may be a need for natural gas storage. After all, the Valley's growth curve is high; merchant power plants are going in; natural gas is a proven fuel source; and residential demands for electric power will keep rising.

According to El Paso, the proposed project on land the company owns would increase the availability of supplies and customers would not have to reserve extra pipeline capacity. When surges in demand hit, the gas could be removed, and at a lower cost than if purchased on the spot market. It's a rational argument buttressed by the firm's projection that natural gas demand will grow by 50 percent over the next 15 years.

But El Paso is not the only company looking at the Valley to expand. According to the Arizona Corporation Commission, other firms are planning new pipelines to capitalize on the region's burgeoning growth.

El Paso officials insist the proposed Copper Eagle facility would be safe and the site is ideal geologically. It's also not far from El Paso's main east-west pipeline.

"We've learned a lot since Carlsbad," says El Paso spokesman Mel Scott, "to make sure nothing like that happens again." Four years ago, 12 campers lost their lives in New Mexico when a gas line ruptured, and West Valley opponents such as Avondale Mayor Ron Drake remain unconvinced about company pronouncements. "Weird stuff happens," he says.

The proposed facility, we believe, would be in the wrong location. It's smack in the middle of the West Valley's growth path. It's within a mile of Luke, its base housing, hospital and Luke Elementary School, and a 36-inch pipeline would cross the base's Accident Potential Zone, where fighter jets sometimes crash.

An independent risk analysis revealed that under certain climate conditions, a gas leak of 7 percent of the 9.6 billion cubic feet capacity could produce an explosive plume covering an area of 2.8 miles which, according to Rusty Mitchell, chief of Luke's community initiatives team, would "cover the entire base."

Though El Paso officials have quietly been meeting with stakeholders, one by one cities have been passing resolutions against the project. The county supervisors have done so, too. And state Rep. John Nelson, R-Glendale, has introduced legislation that would prohibit large natural gas storage facilities within three miles of a city, airport or military airport.

This is a strong line-up, one that ought to give El Paso strong pause. But in matters such as these, the Federal Energy Regulatory Commission will have the final say.

We hope the process doesn't get that far. We hope that El Paso will look elsewhere - away from populated areas - to store its natural gas. There are salt caverns in other parts of Arizona. It makes little sense to pursue this project in this location. It's

912



Classified

- autos
- business
- CareerBuilder
- personals
- real estate
- rentals
- services
- stuff

find & fast

- weather
- obituaries
- lottery
- site map
- help
- contact us
- about us
- republic store

shopping center

- coupons
- newspaper ads
- tickets

WHAT'S YOUR CAR WORTH?

FAMILY LAW

Search for PHOENIX area homes in the M.L.S. **zillow**

Reduce the Risk of Type 2 Diabetes

912

FRONT PAGE

LOCAL

SPORTS

BUSINESS

ARIZONA LIVING

OPINIONS

azcentral.com

February 25, 2004

LOCAL online print edition

Print This | Email This | Most Popular | Subscribe | Larger Type | Smaller Type

Sunday Sections

- A&E
- CareerBuilder
- Travel & Explore
- Viewpoints

Weekly Features

- Food & Drink
- Your Home
- Movie Preview
- Wheels
- Yes

Communities

- Ahwatukee
- Chandler
- Gilbert
- Mesa
- Scottsdale
- Tempe
- North/Central Phoenix
- Northeast Phoenix
- Central/South Phoenix
- Glendale / Peoria
- Southwest Valley
- Sun Cities / Surprise

7-Day Archive

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Advanced search, tips

Advanced search, tips

WIN A FREE TRIP TO BASHAS

WIN A FREE TRIP TO BASHAS

Protecting Luke is aim

Restricting use near airfield 1 of proposals

Paul Davenport
Associated Press
Feb. 19, 2004 12:00 AM

National security concerns and fears about the possible closure of Arizona military bases have legislators moving to step up efforts to protect bases and flight training routes.

"After 9/11, I'm going to lean on the side of caution," Rep. Ray Barnes, R-Phoenix, said while voting for a bill to keep a natural-gas company from locating an underground storage facility near Luke Air Force Base.

Other bills endorsed by the Utilities and Municipalities Committee on Wednesday would mandate new disclosures to property buyers under low-level flight routes that crisscross huge expanses of rural Arizona and restrict land use around an auxiliary airfield called crucial to Luke air base, a major pilot training base.

The committee voted unanimously for those two bills, House Bill 2140 and House Bill 2141, and split 4-3 on the storage facility bill, House Bill 2134.

Consideration of those bills came as a related bill, House Bill 2605, on land-use planning and base preservation projects awaits action in the House. That bill was recommended by a task force appointed by Gov. Janet Napolitano.

Some of the votes Wednesday left committee members struggling as they weighed competing interests that include property rights, national security and the state's economy.

"The military bases are prime economic generators within the state," said Rep. John Nelson, sponsor of the three bills.

Luke's Auxiliary Field No. 1, located just outside Surprise and about 15 miles northwest of Luke, is used by pilots to practice landing approaches though not actual landings.

The auxiliary field was built in 1941 in what was then bare desert. Housing developments are now popping up in the area.

Nelson's bill would bar local governments from allowing subdivisions in the noise and accident-potential zones around the auxiliary field, restrictions already in place for major military bases.

Luke itself cannot handle all of those thousands of sorties so the auxiliary field and the Air Force want to keep those low-level flights away from populated areas as much as possible, a military official said.

"This is some of our most dangerous flying," said James "Rusty" Mitchell, a retired officer who directs Luke's community initiatives team.

"An aircraft going down in that area is going to impact several houses."

That means the auxiliary field also must be protected from encroachment to keep Luke off the hit list in the next round of military base closings, said Nelson, R-Glendale.

"If we don't help the base maintain its mission, we stand as good a

advertisement

LOCAL PHOENIX

azcentral.com

- Fears of a hockey strike disrupt Coyotes' projects
 - High-stakes AJMS tests under way
 - Irked landowners thwart Tempe project
 - Girlfriend of ex-ASU star to change plea in robbery case
 - Pentagon announces its criteria for base closures
 - Slain woman found at park was pregnant
 - Scottsdale police chief opposes later 'last call'
 - County health facility to be done in May '05
 - State stops teen's roof rat work
 - Police officer is suspended in El Mirage
 - NAU paper's sex article causing stir
 - Napolitano vows to expand aid for at-risk moms
 - Gonzo named in suit alleging idea was stolen
- Click for more News

chance as anybody of losing it," Nelson said.

Nelson and others said behind-the-scenes talks are under way to negotiate compromise legislation with real estate developers but that finding money to compensate landowners whose property can't be developed is a problem.

The flight-route bill is an attempt to start dealing with what could be a problem as development takes place in more rural Arizona areas where military pilots have flown for decades, many going to and from the Barry Goldwater range, Nelson said.

Changing the routes to avoid new development is not an option because of the environmental hurdles involved, said Rep. Jennifer Burns, R-Tucson.

Nelson said he sympathized with El Paso Corp. but opposes the Houston-based company's plan for a storage facility in salt domes near Luke.

Peter Jaskoski, El Paso's director of state government affairs, said the company needs the storage to make sure it has enough gas on hand to meet Arizona's growing demand.

[Print This](#) | [Email This](#) | [Most Popular](#) | [Subscribe](#) | [Larger Type](#) | [Smaller Type](#)

azcentral.com - [News](#) • [Sports](#) • [Money](#) • [Entertainment](#) • [Style](#) • [Travel](#) • [Health](#) • [Food & Home](#) • [Shop](#)
12 News - [News](#) • [Weather](#) • [What's on 12](#) • [About 12](#) • [12 News Bios](#) • [12 News Today](#) • [Jobs at KPXX](#)

[front page](#) | [local](#) | [sports](#) | [business](#) | [arizona living](#) | [opinions](#)
[a&e](#) | [careerbuilder](#) | [travel & explore](#) | [viewpoints](#) | [house & home](#) | [food & drink](#) | [wheels](#) |
[site map](#) | [azcentral.com main](#) | [news](#) | [sports](#) | [money](#) | [entertainment](#) | [style](#) | [travel](#) | [health](#)
[families](#) | [food & home](#) | [shop](#) | [español](#) | [classifieds](#) | [weather](#) | [maps](#)

[customer service](#) | [terms of service](#) | [contact The Republic](#) | [subscribe to The Arizona Republic](#)
[Newspapers In Education](#) | [The Republic in your community](#) | [about The Republic](#) | [about KPXX-TV](#) | [The News Store](#)

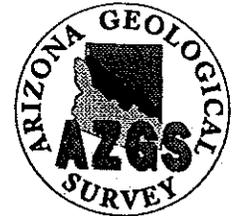
Copyright 2004, azcentral.com. All rights reserved.
[USA Today](#) | [Gannett Co. Inc.](#) | [Gannett Foundation](#) | [Real Cities Network](#)



Janet Napolitano
Governor

State of Arizona
Arizona Geological Survey

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



Larry D. Fellows
Director and State Geologist

February 11, 2004

Mr. Jerry Worsham
Gammage & Burnham
Two N Central Ave 18th Floor
Phoenix AZ 85004

912

Dear Mr. Worsham:

I have enclosed my letter of December 17, 2003 notifying El Paso of its need to request temporary abandonment for its three stratigraphic wells and El Paso's subsequent request dated January 7, 2004. I distributed these letters to the Oil and Gas Commissioners as background information for their January 23, 2004 meeting.

The Oil and Gas Conservation Commission voted in its meeting of January 23, 2004, to grant temporary abandonment to El Paso's wells for a period of five years. I have enclosed a copy of the minutes that record that vote.

Sincerely,

A handwritten signature in cursive script that reads "Steven L. Rauzi".

Steven L. Rauzi
Oil & Gas Administrator

Enclosures

9/12

West Valley OPINIONS

THE ARIZONA REPUBLIC

Editorials represent the position of *The Arizona Republic*, whose Editorial Board consists of Phil Boas, Richard deUriarte, Jennifer Dokes, Cindy Hernandez, Kathleen Ingle, Doug MacEachern, Joel Nilsson, Dan Nowicki, O. Ricardo Pimentel, Robert Robb, Paul Schatt, Linda Valdez, Ken Western and Steve Benson.

EDITORIAL

Salt caverns wrong place for natural gas storage

Our stand: Site too close to everything

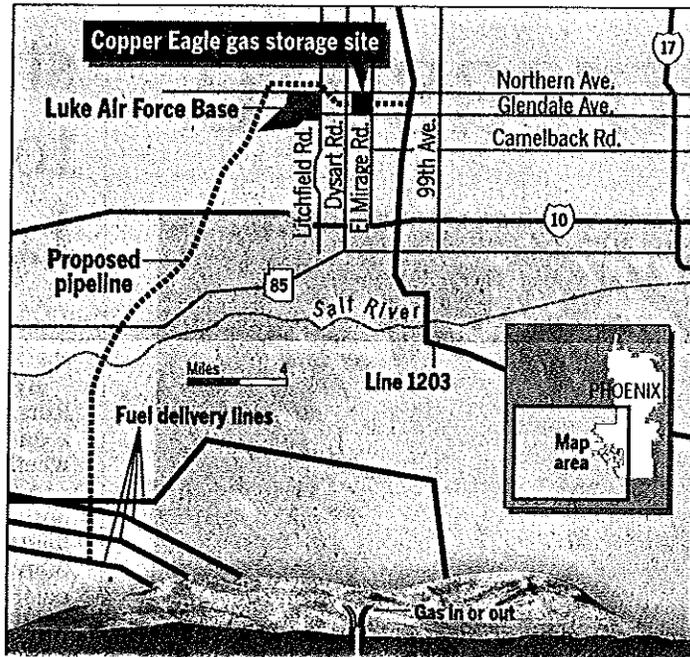
The defensive lineup, on paper, is rock-solid — about as good as it gets. There are the mayors and managers of every municipality in the West Valley, the supervisors from Maricopa County, landowners and residents, top brass at Luke Air Force Base and for good measure, state lawmakers.

But as impressive as this list of combatants is, theirs is probably not an impregnable defense against plans of El Paso Natural Gas Co. to store a huge amount of gas — 9.6 billion cubic feet — in three salt caverns underground in the West Valley. That's because the Federal Energy Regulatory Commission will have the last word.

We hope it doesn't get to that point. El Paso has been briefing West Valley offi-

Gas storage cavern

Gas can be stored cheaply in salt caverns, and salt is a good storage medium for natural gas, but opponents of the proposed facility don't think it should be placed in that location.



top brass at Luke Air Force Base and for good measure, state lawmakers.

But as impressive as this list of combatants is, theirs is probably not an impregnable defense against plans of El Paso Natural Gas Co. to store a huge amount of gas — 9.6 billion cubic feet — in three salt caverns underground in the West Valley. That's because the Federal Energy Regulatory Commission will have the last word.

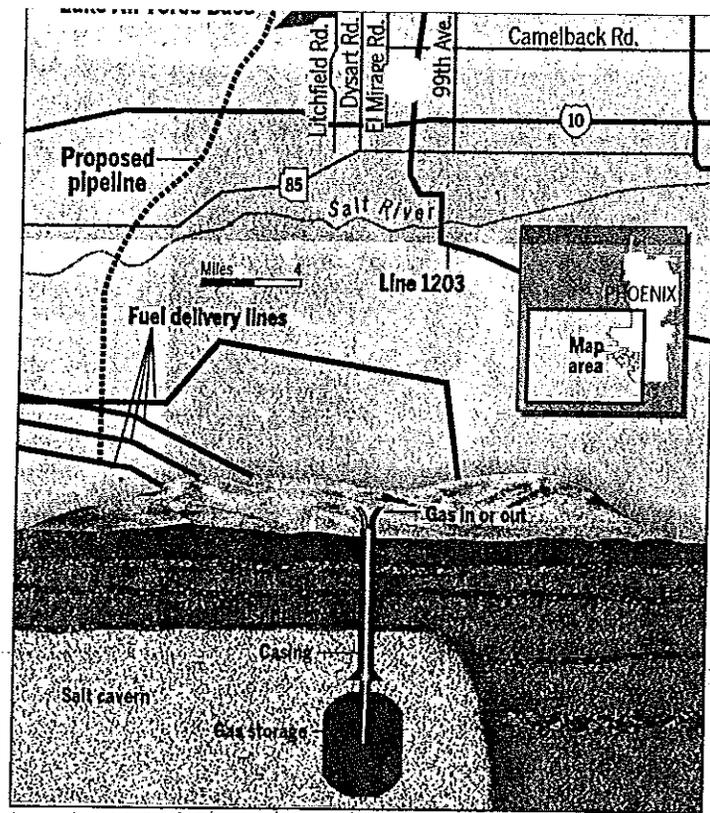
We hope it doesn't get to that point. El Paso has been briefing West Valley officials for the past couple of months, and the information the company has disclosed — to be blunt — hasn't set well.

City after city is passing resolutions against the proposal. The Board of Supervisors has taken a strong stand as well. State Rep. John Nelson, a Glendale Republican, has introduced legislation to prohibit large natural gas storage facilities from being located within three miles of a municipal boundary, airport, military airport or school. It should be a legislative priority.

El Paso, which owns the land near El Mirage Road between Northern and Glendale avenues, should listen to the people. Despite company promises of safety, any way you slice it a storage facility within a mile of Luke Air Force Base and its base housing, hospital and elementary school is the height of foolishness.

Call it contempt for the local residents, the nearby businesses, local governments and Luke, the nation's premier training base for F-16 pilots.

The concerns are legitimate. They are twofold: safety of so large an amount of natural gas



Sources: Interstate Oil and Gas Compact Commission, El Paso Natural Gas Co.

Dan Kempton/The Arizona Republic

stored underground in an urban setting and the impact a project of this magnitude would have on Luke's mission and base's ability to survive the next round of closings in 2005.

To say the least, a storage facility and a 36-inch pipeline around the base and across its Accident Potential Zone are as compatible as oil and water.

El Paso makes the case that growth in the Valley will increase the demand for natural gas and that a storage facility would give customers adequate supplies at lower cost when there are sudden surges in demand. It's a logical argument that demonstrates the need for more infrastructure in the region to accommodate our growth curve, whether it be El Paso or some other gas company willing to supply the gas that we'll need.

That said, the potential impact of El Paso proposed Copper Eagle storage facility is far too great a risk. An independent risk analysis revealed that under certain climate conditions, a gas leak of 7 percent of capacity could produce an explosive plume covering an area of 2.8 miles, which, according to Rusty Mitchell, chief of Luke's community initiatives team, would "cover the entire base."

The opposition of the base, cities, lawmakers and landowners is solely based on the location. They are all too familiar with an El Paso pipeline explosion in 2000 near Carlsbad, N.M., that killed 12 campers.

Surely there are salt caverns not smack in the middle of a vast urban area — a region that will get denser in the years ahead. They would be far more appropriate.



Janet Napolitano
Governor

State of Arizona
Arizona Geological Survey

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



Larry D. Fellows
Director and State Geologist

January 26, 2004

Mr. Greg Gettman
El Paso Western Pipeline
2 North Nevada Ave
Colorado Springs CO 80903

912

Re: Wells 1-24 SunCor (Permit 909), 1-19 SunCor (Permit 911), and
1-12 Kakerlee (Permit 912)

Dear Mr. Gettman:

This letter will confirm that the Oil and Gas Conservation Commission voted in its meeting of January 23, 2004, to grant temporary abandonment to the referenced wells for a period of five years.

Sincerely,

A handwritten signature in cursive script that reads "Steven L. Rauzi".

Steven L. Rauzi
Oil & Gas Administrator

January 12, 2004

Mr. Steven Rauzi
State of Arizona
Oil & Gas Conservation Commission
416 West Congress
Suite 100
Tucson, AZ 85701

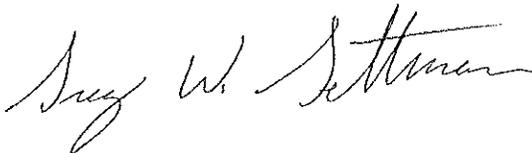
912

RE: Copper Eagle Gas Storage LLC
Kakerlee #1-12 (Sec. 12, T2N, R2W)
Maricopa County, AZ

Dear Mr. Rauzi:

Attached is the schematic for the Kakerlee 1-12 for inclusion with the Sundry Notice and Reports Form requesting approval to temporarily abandon the Kakerlee for up to five years pursuant to the provisions of ACC R12-7-125. If you have any questions or require additional information, please give me a call at (719) 520-4533.

Sincerely,



Greg W. Gettman
Manager, Facility Planning

January 7, 2004

Mr. Steven Rauzi
State of Arizona
Oil & Gas Conservation Commission
416 West Congress
Suite 100
Tucson, AZ 85701

912

RE: Copper Eagle Gas Storage LLC
✓ Kakerlee #1-12 (Sec. 12, T2N, R2W) ✓
SunCor Development #1-19 (Sec. 19, T2N, R1W)
SunCor Development #1-24 (Sec. 24, T2N, R2W)
Maricopa County, AZ

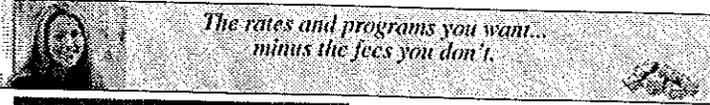
Dear Mr. Rauzi:

Attached are the Sundry Notice and Reports Forms requesting approval from the Arizona Oil and Gas Conservation Commission to temporarily abandon the captioned wells for up to five years pursuant to the provisions of ACC R12-7-125. The referenced schematic for the Kakerlee 1-12 will be provided in a subsequent mailing. If you have any questions or require additional information, please give me a call at (719) 520-4533.

Sincerely,



Greg W. Gettman
Manager, Facility Planning



azcentral.com

Email this article
Print this article
Most popular pages

Click to send
Click to print
Today | This Week

Luke opposed to gas plan

Firm wants storage in cave near base

David Madrid
The Arizona Republic
Jan. 2, 2004 12:00 AM

El Paso Natural Gas Co. plans to store 9.6 billion cubic feet of natural gas in mammoth salt caverns located within a mile of Luke Air Force Base, its hospital, school and base housing.

The base, some of its neighbors and local and state officials oppose the proposed facility, citing the safety of the people who live and work nearby. But there is also fear that a natural gas storage facility could damage Luke at a time when the state is trying to protect the base from closing.

In 2005, a quarter of the nation's military bases will be targeted for closure.

"Allowing underground gas storage facilities within a few miles of an airfield would jeopardize Luke's mission and survival," said state Rep. John Nelson, R-Phoenix.

El Paso Natural Gas Co. owns 455 acres west of El Mirage Road between Northern and Glendale avenues. The company wants to build the Copper Eagle gas storage facility there because of a significant underground salt dome, where the company could create three large salt caverns. Each of the caverns could store 3.2 billion cubic feet of natural gas. The roof of the dome would be one-half mile underground, according to company officials.

El Paso wants to use the salt caverns because large quantities of natural gas can be stored there cheaply, salt is a good storage medium and the caverns are inexpensive to build.

36-inch pipeline

In addition to the storage facility, a proposed 36-inch natural-gas pipeline would skirt Luke to the west and north and then connect to the facility.

Col. Pete Costello, vice commander of Luke, said he has met with the gas company's representatives, landowners who live near the base and local government officials.

"Based on the current information we have, we at Luke are opposed to the project," Costello said.

Wind a problem

An independent analysis of the risks associated with a potential gas leak indicates the wind could carry natural gas over Luke Elementary School, base housing, Luke Air Force Base Hospital and the base itself, Costello said.

"From Luke's perspective, there are no benefits, only risks," Costello said.

Public info vowed

Kim Wallace, a spokeswoman for El Paso Natural Gas Co., said it is so early in the process that there haven't been any public meetings yet, but eventually the company must provide information to the public and hold meetings.

The company also will work with regulatory agencies to make sure everything is

done properly, she said.

912

Safety paramount

"Obviously, safety is absolutely paramount for us," Wallace said. "It's more important than anything else. So we're going to put it (facility) through all the testing and be sure and be in constant contact with all the stakeholders in order to make it absolutely as safe as possible."

She said the facility will be state-of-the-art and follow all safety regulations.

"The driver for the location is simply the geology for where the salt dome itself is," Wallace said.

If Nelson, a West Valley legislator, has his way, the natural-gas storage facility won't be built anywhere near Luke.

Bill sets limits

He has drafted a bill that would prohibit underground natural-gas storage facilities from being built within three miles of a municipality or civilian or military airport.

'Wait a minute'

"I think this is practical legislation that is not retributive towards anybody, or trying to be obstructive," he said. "It's saying 'Wait a minute, the community has a right to exist without having something of this magnitude dumped on it.'"

Law needed

Nelson said the state should have a stringent and straightforward law in place to help strengthen its position when it comes time for the Federal Energy Regulatory Commission's approval process.

"That tells them what the feeling of the state is as far as the location of these facilities," he said. "We're not saying don't do it; we're saying don't do it here."

County Supervisor Max Wilson said the county plans to hire an attorney experienced with natural gas facilities and pipelines so that the county can be prepared to deal with the issue. "We're just getting our ducks lined up," he said.

Worried over accident

Wilson said he is concerned that an accident similar to what happened near Carlsbad, N.M., could happen near Luke. On Aug. 19, 2000, an El Paso Natural Gas Co. 30-inch pipeline ruptured and exploded killing 12 people who were camping nearby. The gas burned for 55 minutes, and flames reached an estimated 490 feet high.

Wallace said the gas company learned a lot from the Carlsbad accident. She said it spent millions of dollars over the past three years modifying its pipeline system, making it safer and easier to inspect.

Suffocation danger

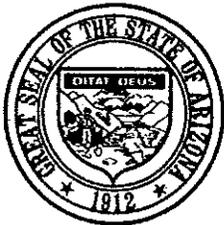
Douglas Fant, a local attorney who worked 19 years in the oil and gas industry, says the gas that will be moving through the 36-inch pipeline will have no odor or color and that if enough escapes, it would displace oxygen and suffocate people.

"So that can be a problem for people sleeping in neighborhoods," Fant said.

If the escaped gas ignited, it would explode, he said.

Fant said there are other less populated locations in the state the gas company should be considering.

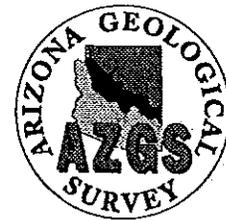
He said there are similar salt formations near Kingman and Picacho Peak between Tucson and Phoenix.



Janet Napolitano
Governor

State of Arizona
Arizona Geological Survey

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



Larry D. Fellows
Director and State Geologist

December 17, 2003

Mr. Greg Gettman
El Paso Western Pipeline
2 North Nevada Ave
Colorado Springs CO 80903

912

Re: Wells 1-24 SunCor (Permit 909), 1-19 SunCor (Permit 911), and
1-12 Kakerlee (Permit 912)

Dear Greg:

As we discussed, A.A.C. R12-7-125 requires an operator to plug a well after suspending operations unless the Oil and Gas Conservation Commission (OGCC) permits the well to be temporarily abandoned. It is now necessary for El Paso to request temporary abandonment for the referenced wells in accordance with R12-7-125. El Paso can then continue its evaluation of the wells in accordance with R12-7-125(D).

The next meeting of the OGCC is scheduled for January 23, 2004 in Phoenix. Please submit a written request for temporary abandonment in accordance with R12-7-125(B) before January 9, 2004 and the OGCC will place the request on the agenda for the January 23 meeting.

I have enclosed a copy of A.A.C. R12-7-125 and a Sundry Notice Form for your reference and use. Please call me if you have any questions.

Sincerely,

Steven L. Rauzi

Steven L. Rauzi
Oil & Gas Administrator

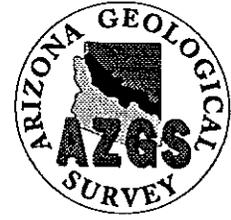
Enclosure



Janet Napolitano
Governor

State of Arizona
Arizona Geological Survey

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



Larry D. Fellows
Director and State Geologist

October 15, 2003

Mr. Matt Reid
Arizona Public Service
Mail Station 8974
P O Box 52034
Phoenix AZ 85072-2034

912

Re: Release of Bonds:

Permit #909 – Bond No. 929224112, Continental Casualty Company
Permit #911 – Bond No. 929237470, Continental Casualty Company
Permit #912 – Bond No. 929237471, Continental Casualty Company

Dear Mr. Reid:

Our records indicate that Copper Eagle Gas Storage LLC has posted a new performance bond for the referenced wells in accordance with R12-7-103(C). As a result, this letter constitutes written permission to terminate liability under the referenced bonds.

Sincerely,

Steven L. Rauzi
Oil and Gas Administrator

c Larry D. Fellows, Director and State Geologist



Matt Reid
APS Fuel Procurement

Tel. 602-250-3109
Fax 602-250-3628
e-mail mjreid@apsc.com

Mail Station 8974
PO Box 52034
Phoenix, Arizona 85072-2034

October 15, 2003

Mr. Steve Rauzi
Oil & Gas Administrator
State of Arizona
Arizona Geological Survey
416 Congress, Suite 100
Tucson, AZ 85701

912

Subject: Release of Performance Bonds for Stratigraphic Test Wells #1-24, 1-19 and 1-12

Dear Steve:

I understand that the new owner of Copper Eagle Gas Storage, LLC has provided replacement bonds for the subject stratigraphic test wells. The purpose of this letter is to request the release of the performance bonds listed below:

- ◆ Bond 929224112, October 23, 2001 – Stratigraphic Test Well site 1-24 near Cotton Lane and Indian School
- ◆ Bond 929237470, June 4, 2002 for Stratigraphic Test Well site 1-19 near Camelback and west of Reems
- ◆ Bond 929237471, June 4, 2002, for Stratigraphic Test site 1 - 12 near Bethany Home and Sarival Road

If you have any questions or need additional information, please contact me at 602 250-3109.

Sincerely,

Matt Reid
Arizona Public Service

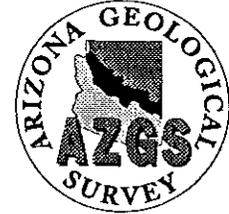
Xc: Curt Brechtel (APS)
Kerri Baginski (PWCC)



Janet Napolitano
Governor

State of Arizona
Arizona Geological Survey

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



Larry D. Fellows
Director and State Geologist

October 14, 2003

Ms. Gloria Burkes
Insurance Analyst
Insurance and Risk Management
El Paso Corporation
P O Box 2511
Houston TX 77252-2511

912

Dear Ms. Burkes:

I have enclosed an approved duplicate original blanket performance bond, Serial No. 104154344, for your files.

Sincerely,

A handwritten signature in cursive script that reads "Steven L. Rauzi".

Steven L. Rauzi
Oil & Gas Administrator

Enclosure

912

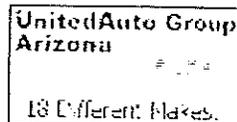
central

PRINT

Sponsored by



Pinnacle West sells 50% stake in W. Valley gas storage site



advertisement

Max Jarman
The Arizona Republic
Aug. 27, 2003 12:00 AM

Pinnacle West Energy reported Tuesday that it sold its 50 percent stake in a proposed natural gas storage facility west of Phoenix to a subsidiary of El Paso Corp. for \$11.7 million.

The Pinnacle West Capital Corp. unit sold its interest in the project to El Paso Natural Gas, a natural gas supply firm. Its parent, El Paso Corp., is the nation's largest operator of natural gas pipelines and owner of the lines that serve Maricopa County and much of Arizona. El Paso also purchased the remaining 50 percent interest in the project from GulfTerra Energy Partners and Gaz de France.

The facility has been on the drawing board since 2001 and would help to ensure a stable supply of natural gas for heating and electricity generation. It also would help ensure stabler consumer prices for those commodities.

The project, near Glendale and Dysart roads in western Maricopa County, involves the construction of three massive underground storage caverns, thousands of feet below ground. The caverns would be carved out of an existing natural salt deposit using pressurized water.

Combined, the tanks would be capable of storing 3.2 billion cubic feet of gas, enough fuel to run a 2,000-megawatt power plant for 10 days. A megawatt can light about 800 homes.

El Paso intends to seek permission from federal regulators to build the storage caverns by April and begin storage in early 2007.

Find this article at:

<http://www.azcentral.com/arizonarepublic/business/articles/0827gasstorage270.html>

Check the box to include the list of links referenced in the article.



912

August 25, 2003

Pinnacle West Energy sells gas storage interest to El Paso Natural Gas

PHOENIX – Pinnacle West Energy, a subsidiary of Pinnacle West Capital Corp. (NYSE: PNW), announced today that it has sold its 50-percent interest in the proposed Copper Eagle Gas Storage project to El Paso Natural Gas Company, a subsidiary of El Paso Corporation. (NYSE: EP).

Pinnacle West continues to support the development of Copper Eagle because of the critical role it would play in increasing the reliability of the energy infrastructure in the West. El Paso Natural Gas brings the appropriate experience to the development and operation of a project of this nature.

"This kind of facility is essential to the Southwest's continuing economic health and the reliability of the power supply in the West," said Jim Levine, President and CEO of Pinnacle West Energy. "The electricity market in this region is becoming increasingly more dependent on natural gas, and storage projects like Copper Eagle will provide additional security for Arizona's fuel supply during periods of high electricity and gas demand.

"Because Pinnacle West believes development of gas storage is critical to the reliability of our regional gas supply, we have sold our interest in the project to a company with the appropriate experience in the natural gas industry," he said. "Through Arizona Public Service and Pinnacle West Energy, we are focused on our core business, which is providing reliable electric service to our retail customers throughout Arizona."

Copper Eagle is a proposed natural gas storage project that would be located near Luke Air Force Base in western Maricopa County. Feasibility studies began in 2001 on a naturally occurring salt deposit in the area 20 miles west of Phoenix to determine if it has the potential to support the underground cavern storage facility.

Pinnacle West Capital Corp. is a Phoenix-based company with consolidated assets of approximately \$9 billion. Through its subsidiaries, the company generates, sells and delivers electricity and sells energy-related products and services to retail and wholesale customers in the western United States. It also develops residential, commercial and industrial real estate projects.

Contacts

Media:

Jim McDonald; 602-250-3738, 602-321-3738 (cell)

Analyst:

Rebecca Hickman, (602) 250-5668

Sheri Foote; 602-250-2363, 602-684-1332 (cell)

News Releases Index

El Paso Natural Gas Company Announces Purchase of Copper Eagle LLC

HOUSTON, TEXAS, August 6, 2003—El Paso Natural Gas Company, a subsidiary of El Paso Corporation (NYSE:EP), today announced the purchase of Copper Eagle Gas Storage, LLC, which is developing a natural gas storage project located outside of Phoenix, Arizona.

The development of the storage project will include the creation of three storage caverns out of an existing sub-surface salt formation thousands of feet beneath the earth's surface. Each cavern will have a withdrawal capacity of 320,000 thousand cubic feet per day (Mcf/d), injection capacity of 160,000 Mcf/d, and a working gas storage capacity of 3.2 billion cubic feet. Each cavern could supply the natural gas required to fuel 2,000 megawatts of electric power generation for 10 days. The number of caverns that are developed and the timing of the development will be matched with customer needs. The storage facility will be connected to the El Paso Natural Gas pipeline system, which delivers natural gas supplies to the southwest, including the Phoenix area.

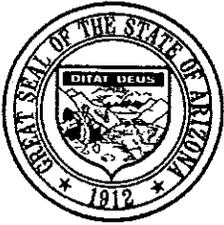
"Copper Eagle Gas Storage could be the first natural gas storage project developed in the Phoenix area," said Patricia A. Shelton, president of the Western Pipeline Group for El Paso Corporation. "We are excited to offer an important new source of natural gas storage and related services to the markets in and around this area through the development of this project. Copper Eagle can benefit our customers by providing a more secure and flexible gas supply for the region's local distribution companies and electric generators on a year-round basis. We are eager to move forward with this project as soon as we receive long-term commitments from our customers."

El Paso Natural Gas plans to hold a non-binding open season in the near future to gauge customers' specific needs from the project in order to assist in determining the sizing of the facilities and the types of services that will be offered. If sufficient commitment exists, the company's goal is to file for authorization to construct and operate the facility with the Federal Regulatory Energy Commission by April of 2004, with a projected first cavern in-service date for the project in early 2007.

El Paso Natural Gas purchased the project from Arizona Gas Storage L.L.C. and APACS Holdings L.L.C. Arizona Gas Storage is owned by GulfTerra Arizona Gas L.L.C., a subsidiary of GulfTerra Energy Partners, L.P. (NYSE:GTM); and IntraGas US, a Gaz de France North American subsidiary. APACS Holdings L.L.C. is a wholly owned subsidiary of Pinnacle West Energy, a subsidiary of Pinnacle West Capital Corp. (NYSE:PNW).

El Paso Corporation is the leading provider of natural gas services and the largest pipeline company in North America. The company has core businesses in pipelines, production, and midstream services. Rich in assets, El Paso is committed to developing and delivering new energy supplies and to meeting the growing demand for new energy infrastructure. For more information, visit www.elpaso.com.

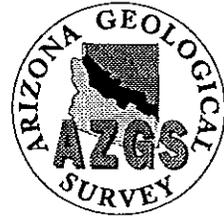
This This release includes forward-looking statements and projections, made in reliance on the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. The company has made every reasonable effort to ensure that the information and assumptions on which these statements and projections are based are current, reasonable, and complete. However, a variety of factors could cause actual results to differ materially from the projections, anticipated results or other expectations expressed in this release, including, without limitation, the successful implementation of the 2003 operational and financial plan; the successful implementation of the settlement related to the western energy crisis; actions by the credit rating agencies; the successful close of financing transactions; our ability to successfully exit the energy trading business; our ability to divest of certain non-core assets; changes in commodity prices for oil, natural gas, and power; general economic and weather conditions in geographic regions or markets served by El Paso Corporation and its affiliates, or where operations of the company and its affiliates are located; the uncertainties associated with governmental regulation; political and currency risks associated with international operations of the company and its affiliates; inability to realize anticipated synergies and cost savings associated with restructurings and divestitures on a timely basis; difficulty in integration of the operations of previously acquired companies, competition, and other factors described in the company's (and its affiliates') Securities and Exchange Commission filings. While the company makes these statements and projections in good faith, neither the company nor its management can guarantee that anticipated future results will be achieved. Reference must be made to those filings for additional important factors that may affect actual results. The company assumes no obligation to publicly update or revise any forward-looking statements made herein or any other forward-looking statements made by the company, whether as a result of new information, future events, or otherwise.



Janet Napolitano
Governor

State of Arizona
Arizona Geological Survey

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



Larry D. Fellows
Director and State Geologist

April 23, 2003

Mr. Greg Gettman
El Paso Western Pipeline
2 North Nevada Ave
Colorado Springs CO 80903

912

Dear Greg:

I have enclosed a copy of our Bulletin 195, *Geology of the South Mountains, Central Arizona*, an article from the Geological Society of America Special Paper 323, *Seismic reflection evidence for detachment polarity beneath a major accommodation zone, west-central Arizona*, and excerpts from our Contributed Report CR-02-A, *Subsurface geology of the easternmost Phoenix basin, Arizona: implications for groundwater flow*, and USGS Administrative Report, *Investigation of hydrogeology, land subsidence, and earth fissures, Luke Air Force Base, Arizona*. These represent relatively recent thinking about the geology and geologic framework of the area.

Note the section on chloritic breccia on page 21 in Bulletin 195. Some of the core from the deep strat tests resembles chloritic breccia. Contributed Report CR-02-A is available on a CD.

Our research geologists Jon Spencer and Steve Richard are available, unless they are in the field, to share their understanding and knowledge of Arizona geology with you. I understand that Herb Schumann, co-author of the Administrative Report, now consults out of Tempe (480-945-6577).

I hope this helps.

Sincerely,

Steven L. Rauzi
Oil & Gas Administrator

Enclosures

Subject: Re: Copper Eagle Temporarily Abandoned Stratigraphic Test Wells
From: Steve Rauzi <Steve.Rauzi@azgs.az.gov>
Date: Thu, 06 Mar 2003 06:59:15 -0700
To: "Hayden, David" <David.Hayden@ElPaso.com>

912

All seems to be in order. However, do not forget to file core samples (1-12) and a summary of test results (1-19 and 1-12) in accordance with R12-7-121 when they are available. Keep in touch. SLR

Hayden, David wrote:

Steve:

It has been sometime since we talked and I wanted to provide an update. As you know, Copper Eagle completed the drilling and testing of its stratigraphic test wells in Sections 24, 19 and 12 (the SunCor 1-24, SunCor 1-19 and Kakerlee 1-12) and temporarily abandoned the wells subject to possible future utility. The data derived from these wells is being analyzed (several thin section analyses from the Kakerlee core are still in progress) but early indications are encouraging. It is still Copper Eagle's plan to finalize a Class I Application which would propose that these wells ultimately be completed and used to dispose of brine related to the leaching of caverns for natural gas storage. As you are aware Copper Eagle will need to obtain approvals from numerous regulatory agencies, including the AZ Oil & Gas Conservation Commission, the EPA and the FERC, and this process will take time. It is Copper Eagle's understanding that the Commission allows an operator to temporarily abandon wells (as Copper Eagle has done with the Commission's approval) but would like to clarify and/or determine if Copper Eagle needs to take any further action relative to the status of these wells. As per R12-7-125(B), it appears that an operator may temporarily abandon wells for up to 5 years if the operator has provided the required information pursuant to the regulations and has demonstrated a future beneficial use for the wells to a quorum of the Commission. Is there additional information or action required by Copper Eagle to fulfill the regulatory requirements relative to the temporarily abandoned status of the three wells noted above? Your comments are as always greatly appreciated!

Thanks,

David Hayden
Sr. Vice President
Crystal Gas Storage, an El Paso company
401 Edwards Street, Suite 1300
Shreveport, LA 71101
318.677.5511

This email and any files transmitted with it from the El Paso Corporation are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the sender.

VIA UPS OVERNIGHT DELIVERY

December 17, 2002

Mr. Steven Rauzi
Arizona Geological Survey
416 W. Congress
Suite 100
Tucson, AZ 85701

RE: Copper Eagle Gas Storage
Kakerlee #1-12, Maricopa County, AZ



Dear Mr. Rauzi:

Please find enclosed the following well logs as per your request:

1. Platform Express Array Induction SP /GR/ Caliper Log, logging date August 22, 2002.
2. Platform Express Triple Litho Density Compensated Neutron Log, logging date August 22, 2002
3. Borehole Compensated Gamma Ray Log, logging date August 22, 2002
4. Platform Express Array Induction SP GR Caliper Log, logging date September 16, 2002
5. Platform Express Triple Litho Density Compensated Neutron Log, logging date September 16, 2002
6. Platform Express Micro Cylindrically Focused Log, logging date September 16, 2002

Sincerely,



Julie Smith

/js

enclosures

IMPORTANT MESSAGE

FOR Steve
DATE 12/19/02 TIME 11:40 A.M.
P.M.
M Marsha Overlay
OF Overlay Vac Truck Services
PHONE 480-821-5455
AREA CODE NUMBER EXTENSION
 FAX
 MOBILE
AREA CODE NUMBER TIME TO CALL

TELEPHONED		PLEASE CALL	
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		RUSH	
RETURNED YOUR CALL		SPECIAL ATTENTION	

MESSAGE
Contact # for Brammer
Engineering / to the March 2003
= Give her phone # + address
& Jim Lingafelter contact

SIGNED

Subject: #1-12 Kakerlee
From: Steve Rauzi <Steve.Rauzi@azgs.az.gov>
Date: Thu, 12 Dec 2002 10:36:19 -0700
To: Dave Hayden <david.hayden@elpaso.com>

Dave,

This is a reminder to file the wireline logs, etc. for the #1-12 Kakerlee. We have received the cuttings, mud log, CBL (dated 16Sep02), and the Segmented Bond Log (dated 4Oct02).

Steve

Subject: RE: 1-12 Kakerlee
From: "Jim Lingafelter" <Jim.Lingafelter@brammcr.com>
Date: Wed, 16 Oct 2002 13:05:46 -0500
To: "Steve Rauzi" <steve.rauzi@azgs.az.gov>

Will do

Jim Lingafelter
Office: 318-429-2399
Cell: 318-347-2799

-----Original Message-----

From: Steve Rauzi [mailto:steve.rauzi@azgs.az.gov]
Sent: Wednesday, October 16, 2002 11:59 AM
To: Jim Lingafelter
Subject: 1-12 Kakerlee

Dear Jim,

Don't forget to file a summary of the 1-12 hole including TD, casing record, tests, and the details of the TA plug.

Steven L. Rauzi
Oil & Gas Administrator
520-770-3500

More stratigraphic drilling planned in Phoenix area

COPPER EAGLE Gas Storage LLC, Phoenix, has plans to drill two 9000-ft stratigraphic tests in south-central Arizona on the western outskirts of the greater Phoenix metropolitan area.

The Maricopa County ventures, both under contract to Nabors Drilling USA, are the 1-12 Kakerlee LLP, ne se 12-2n-2w, and—one and a half miles to the southeast—the 1-19 SunCor Development Co, ne ne 19-2n-1w.

Two and a half miles south-southwest of the 1-12 Kakerlee site, Copper Eagle last November scheduled a 7500-ft stratigraphic test at the 1-24 SunCor Development Co-Fee in sw sw 24-2n-2w (RMRR 11-6-01).

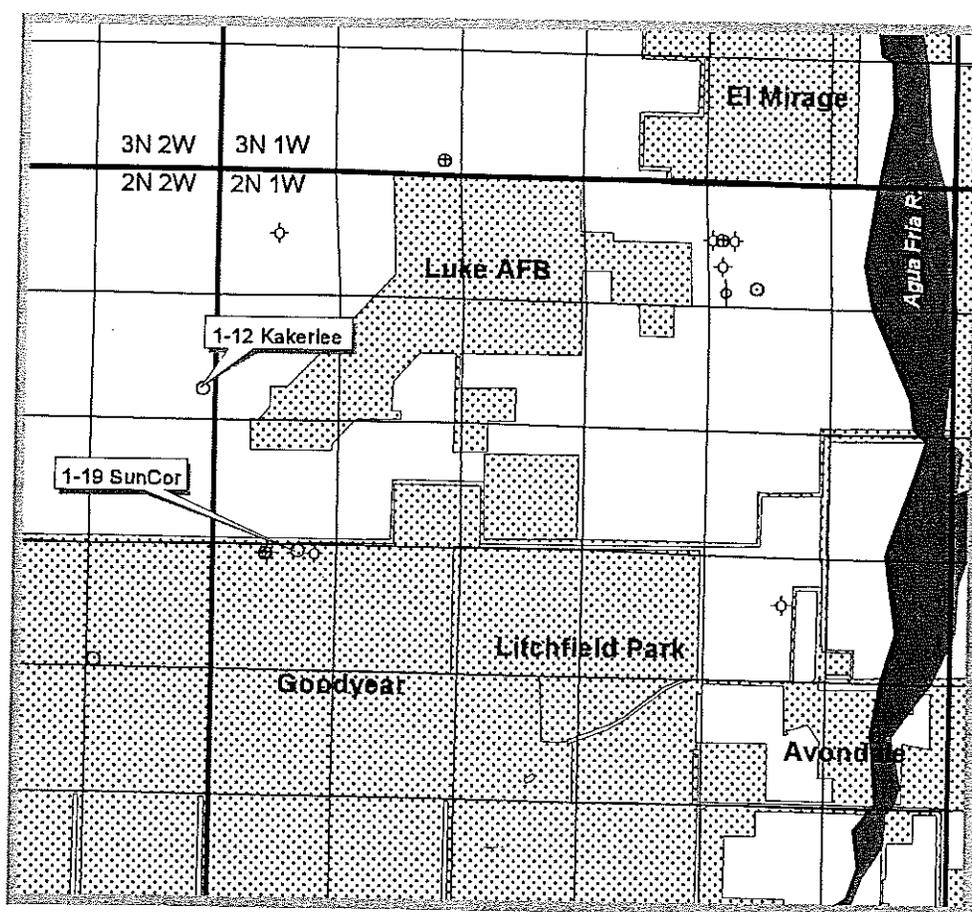
SunCor Development Co, a wholly owned subsidiary of Pinnacle West Capital Corp—among other things the holding company for Arizona Public Service, Arizona's largest electric utility—is a Phoenix-based real estate developer.

SunCor last year drilled the 1-2 SunCor Development Co, se sw 2-2n-1w, a stratigraphic test projected to reach total depth at about 5250 ft. The latter well was drilled by Nabors' Rig #164 on undeveloped acreage

adjacent to an industrial area just east of Luke Air Force Base (RMRR 1-10-01). It was expected to be drilled into the Miocene Luke salt deposit.

latter well drilled into Miocene salt at a depth of 1716 ft.

In 1992, Arrowhead Resources (USA) Ltd completed a 6650-ft dry



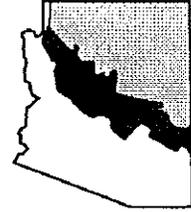
Copper Eagle's 1-19 SunCor site is about 140 ft west of a 4000-ft dry hole completed in 1988 by Bob James Drilling & Exploration at the 1-19 SunCor, also ne ne 19-2n-1w. The

hole at the 32-23 SunCor-Melange in sw ne 23-2n-1w. That wildcat, which had been set up to penetrate volcanics, encountered a water aquifer at a depth of 400-600 ft.



Jane Dee Hull
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 7, 2002

David R. Smith
County Administrative Officer
301 W. Jefferson
Phoenix, AZ 85003
602-506-3571

Re: Copper Eagle Gas Storage LLC stratigraphic test holes
#1-19 SunCor NE NE Sec. 19, T. 2 N., R. 1 W., State Permit #911
#1-12 Kakerlee NE SE Sec. 12, T. 2 N., R. 2 W., State Permit #912

Dear Mr. Smith:

I have enclosed a copy of the approved drilling applications for the referenced wells. It is the Arizona Oil and Gas Conservation Commission's policy to inform county government about proposed exploration and stratigraphic drilling. The referenced wells are stratigraphic tests. They are being drilled for the sole purpose of obtaining subsurface geological information.

The Commission issues a "Permit to Drill" under A.R.S. § 27-513. The Commission approves an application after a well is determined to be in compliance with applicable statutes (A.R.S. § 27-516) and rules (12 A.A.C. 7), which were promulgated to safeguard the public health and safety and protect surface and subsurface resources.

Sincerely,

Steven L. Rauzi
Oil and Gas Administrator

Enclosure

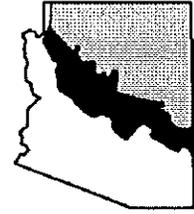
c J. Dale Nations, Chairman, Oil and Gas Conservation Commission
Larry D. Fellows, Director and State Geologist



Jane Dee Hull
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 6, 2002

Mr. Matt Reid
Copper Eagle Gas Storage LLC
400 N 5th Street MS 8974
Phoenix AZ 85004

Re: Copper Eagle Gas Storage LLC stratigraphic test holes:
#1-19 SunCor, NE NE Sec. 19, T. 2 N., R. 1 W., State Permit #911
1-12 Kakerlee, NE SE Sec. 12, T. 2 N., R. 2 W., State Permit #912

Dear Matt:

I have attached an approved application to drill, permit to drill, performance bond, and filing-fee receipt for each of the referenced wells.

These permits are issued on the condition that you conduct operations in compliance with all applicable rules and that you notify me at least 24 hours before you:

- 1) move in the drilling rig and commence drilling operations;
- 2) run and cement surface casing; and
- 3) nipple up and test the BOPE before drilling out of the surface casing.

A sign at the well site is required under rule R12-7-106. Drilling samples are required under rule R12-7-121(B).

Sincerely,

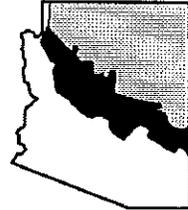
Steven L. Rauzi
Oil & Gas Administrator

Enclosures



Jane Dee Hull
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

MEMORANDUM TO FILE

DATE: May 22, 2002

FROM: ^{SLR} Steven L. Rauzi
Oil and Gas Administrator

912

SUBJECT: Known and reasonably estimated freshwater aquifers in vicinity of
Copper Eagle's proposed stratigraphic test holes:

#1-19 SunCor, ne ne 19-2n-1w, Maricopa County, State Permit #911
#1-12 Kakerlee, ne se 12-2n-2w, Maricopa County, State Permit #912

Rick Herther, Basic Data Section, Arizona Department of Water Resources, provided the following information about the deepest water wells that are registered with the department in the vicinity of the proposed wells.

Sec. 19, T 2 N., R. 1 W.

B(02-01)19aba, 722 ft deep, 20" diameter, drilled 1957, registered to SunCor Development Company - irrigation
B(02-01)19cbb, 1220 ft deep, drilled 1954, registered to SunCor Development Company.

Sec. 12, T 2 N., R. 2 W.

B(02-02)12d, 1200 ft deep, 20" diameter, drilled 1982, registered to Adam & Mutual Water Co., Litchfield Park.

Sec. 24, T 2 N., R. 2 W. (Most registered to SunCor Development Company)

B(02-02)24bbb, 998 ft deep.
B(02-02)24cbb, 1007 ft deep.
B(02-02)24ccc, 1008 ft deep, 16" diameter, drilled 1966, water at 470 ft, registered to SunCor Development Company - irrigation.
B(02-02)24dbb, 956 ft deep.
Plus several monitoring wells less than 100 ft deep.

Sec. 25, T 2 N., R. 2 W.

B(02-02)25abb, 2000 ft deep, drilled 1966, registered to SunCor Development Company.
B(02-02)25bbb, 470 ft deep, 20" diameter, registered to Goodyear Tire & Rubber, Akron OH

Copper Eagle's proposal to set 13 3/8" surface casing from the surface to the top of the salt or 2500' will be sufficient to protect the surface waters and all other reasonably estimated aquifers in the vicinity of the proposed wells.