Form 3160-5
(June 2015)

OCD-ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMLC028793A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other: INJECTION

8. Well Name and No.
RONCO FEDERAL SWD 1

2. Name of Operator
COG OPERATING LLC
Contact: KANICIA CASTILLO
E-Mail: kcastillo@concho.com

9. API Well No.
30-015-44420

3a. Address
600 W ILLINOIS AVE
MIDLAND, TX 79701

3b. Phone No. (include area code)
Ph: 432-685-4332

10. Field and Pool or Exploratory Area
SWD; CISCO-CANYON

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 19 T17S R30E Mer NMP 600FNL 1650FWL

11. County or Parish, State
EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Drilling Operations
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Completion Procedure:

Please see attachment for completion procedure.

Accepted for record
NMOCD
APPROVED
1/3/18

NM OIL CONSERVATION
ARTESIA DISTRICT
JAN 03 2018
RECEIVED

SUBJECT TO LIKE APPROVAL BY STATE

SEE ATTACHED FOR CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #396996 verified by the BLM Well Information System
For COG OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 12/11/2017 ()

Name *(Printed/Typed)* KANICIA CASTILLO — Title PREPARER

Signature (Electronic Submission) — Date 12/05/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Paul R Swartz 12/21/2017 — Title TPET — Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

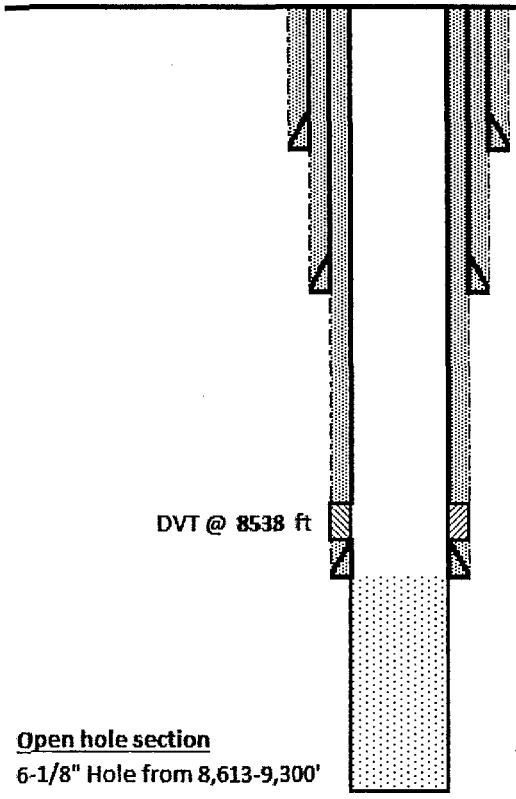
**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Discussion

The Ronco Federal SWD #1 was drilled to the Cisco – Canyon reef in November of 2017. This well is ready to be completed. After sampling the formation fluid, I would like to spot 6k gallons of 15% HCL throughout the open-hole section and then pump a 40k gallon acid job on the well. A detailed procedure can be found below

Wellbore Diagram

Well: Ronco Federal SWD #1
API#: 30-015-44420
Formation: Cisco - Canyon



Surface

13-3/8" 54.5# J55 csg set @	378	ft
Circulated	125	sks

Intermediate

9-5/8" 40# J55 csg set @	1118	ft
Circulated	159	sks

DVT @ 8538 ft

Production

7" 29# L80 csg set @	8613	ft
Nominal ID:	6.184	
Drift ID:	6.059	
Burst Rating:	8,160	psi
Collapse Rating:	7,020	psi
Lead Cement:	1000 sx 35/65 POZH (12.5 ppg / 2.11 yld)	
Tail Cement:	700 sx 35/65 POZH (14.2 ppg / 1.36 yld)	
Circulated	207	sks
TOC @	0	ft

Open hole section
6-1/8" Hole from 8,613-9,300'

General Information
Well name: Ronco Federal SWD #1
API#: 30-015-44420
Procedure prepared by: Ryan Murphy
Date prepared: 12/04/2017

Procedure

- Notify BLM and OCD of intent to start work 24 hours prior to rigging up.
- Hold PJSM, MIRU WSU and kill truck.
- ND WH, NU 7-1/16" BOP w/ 3-1/2" rams
- Unload and tally 9,400' of 3-1/2" L80 8RD work string
- Please have at least (3) 500 bbl frac tanks and (2) lined 500 bbls frac tanks on location
- PU 6-1/8" mill tooth bit and (6) 4-1/8" drill collars to drill out the composite plug at 8,528'
    - Before you tag the 7" CBP add a float to the 3-1/2" work string
- RU the swivel, reverse unit, and stripper head
- Drill out the CBP and push the remains to PBTD at 9,300'
    - Rotate throughout open hole section
- Pull back up into cased hole; we need to collect a sample of the well fluid.
    - Please be prepared to swab the well if necessary
    - The volumes need to be specified by the BLM
    - Please have Catalyst collect a sample of the wellbore fluid. Our petrophysicist would like to have the formation water resistivity for future logging.
- RIH to 9,290' to spot acid

1. At 9,290' spot 1k gallons of 15% HCL. Shut the well in for 1 hour.
2. TOOH to 9,190' and spot 1k gallons of 15% HCL. Shut the well in for 1 hour.
3. TOOH to 9,090' and spot 1k gallons of 15% HCL. Shut the well in for 1 hour.
4. TOOH to 8,990' and spot 1k gallons of 15% HCL. Shut the well in for 1 hour.
5. TOOH to 8,890' and spot 1k gallons of 15% HCL. Shut the well in for 1 hour.
6. TOOH to 8,790' and spot 1k gallons of 15% HCL. Shut the well in for 1 hour.
7. TOOH to 8,690' and spot 1k gallons of 15% HCL. Shut the well in for 1 hour.

See BP 8 of COA

- Pull up to within the 7" csg and record the SITP and SICP.
    - Please call me to discuss ordering kill mud
    - Once we have calculated the necessary MW please kill the well.
- With the well dead TOOH to pick up the production packer
- TIH w/ a 7" AS-1X injection packer w/ a 2.831 profile nipple and a pump out plug
- Set the packer at 8,528'
    - Once the packer is set, get off the on/off tool and circulate the kill mud out of the well.
    - Latch back onto packer and pressure up on the casing to 1k PSI.

- Please have (2) lined 500 bbl tanks filled with a total of 40k gallons of double inhibited 15% HCL.
- RU acid crew
- Rupture pump out plug
- Pump the following acid and rock salt job schedule at a max pressure of ~~3,000~~ 1200psig PSI. Please hold 500 PSI on the backside. Shoot for a rate of 5 BPM. Collect ISIP, 5 min SIP, 10 min SIP, 15 min SIP and shut well in. RDMO and have all data sent to engineer.

See Pg 6 of COA

1. 10,000 gal acid
2. 2,000 lbs graded rock salt in gelled brine
3. 10,000 gal acid
4. 2,000 lbs graded rock salt in gelled brine
5. 10,000 gal acid
6. 2,000 lbs graded rock salt in gelled brine
7. 10,000 gal acid
8. Displace acid to the end of the casing w/ fresh water. Do not over displace acid
9. Shut well in overnight to let acid work on formation.
10. Pump 500 bbls of FW into well to help dissolve any remaining rock salt

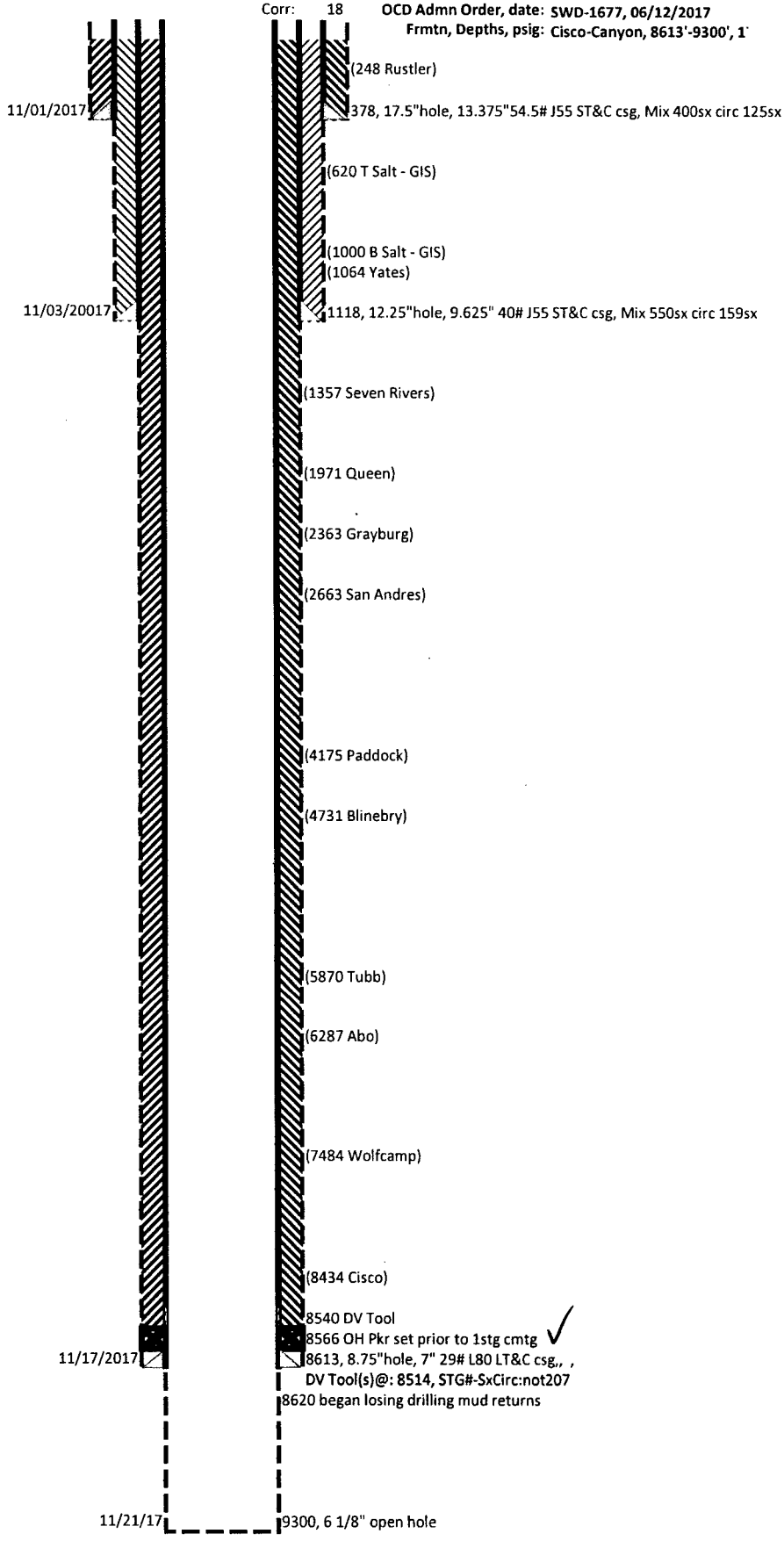
- RU wireline to set a blanking plug in the injection packer profile nipple.
- Get off the on/off tool and LD the work string.
- Change out BOP rams for 4-1/2" tubing
- Unload and tally 8,600' of 4-1/2" 11.6# L80 Buttress GlassBore tubing
- TIH w/ tubing to the top of the packer.
- Reverse circulate annulus w/ approximately 150 bbls of packer fluid
- Latch onto injection packer
- ND BOP, NU WH
- RU wireline to pull the blanking plug
- Contact NMOCD to witness the MIT
    - Once MIT has been performed and witnessed send the chart to Susan Lopez at the Artesia East Office.
- Notify Hilario Jimenez (432-260-5194) when the completion procedure is complete
- Clean location and turn over to operations

Operator: COG Operating LLC
Surface Lease: LC028793a
Case No: LC028793a
Subsurface Concerns for Casing Designs: KFC
Well Status: NOI-WDW
Spud date: 10/31/2017
Plug'd Date:
Reentry Date:

BHL: LC028793a
Lease Agreement

Well: Ronco-01
API: 3001544420
@ Srfce: T17S-R30E,19.600n1650w
@ M TD: T17S-R30E,19.600n1650w
Estate: P/F/F
CWDW, R of W:
OCD Admn Order, date: SWD-1677, 06/12/2017
Frmtn, Depths, psig: Cisco-Canyon, 8613'-9300', 1

KB: 3644
GL: 3626
Corr: 18



last updated: 12/14/2017

_WB Rcd (5.97 Ronco-01 1544420

Conditions of Approval

COG Operating LLC
Ronco - 01, API 3001544420
T17S-R30E, Sec 19, 600FNL & 1650FWL
December 21, 2017

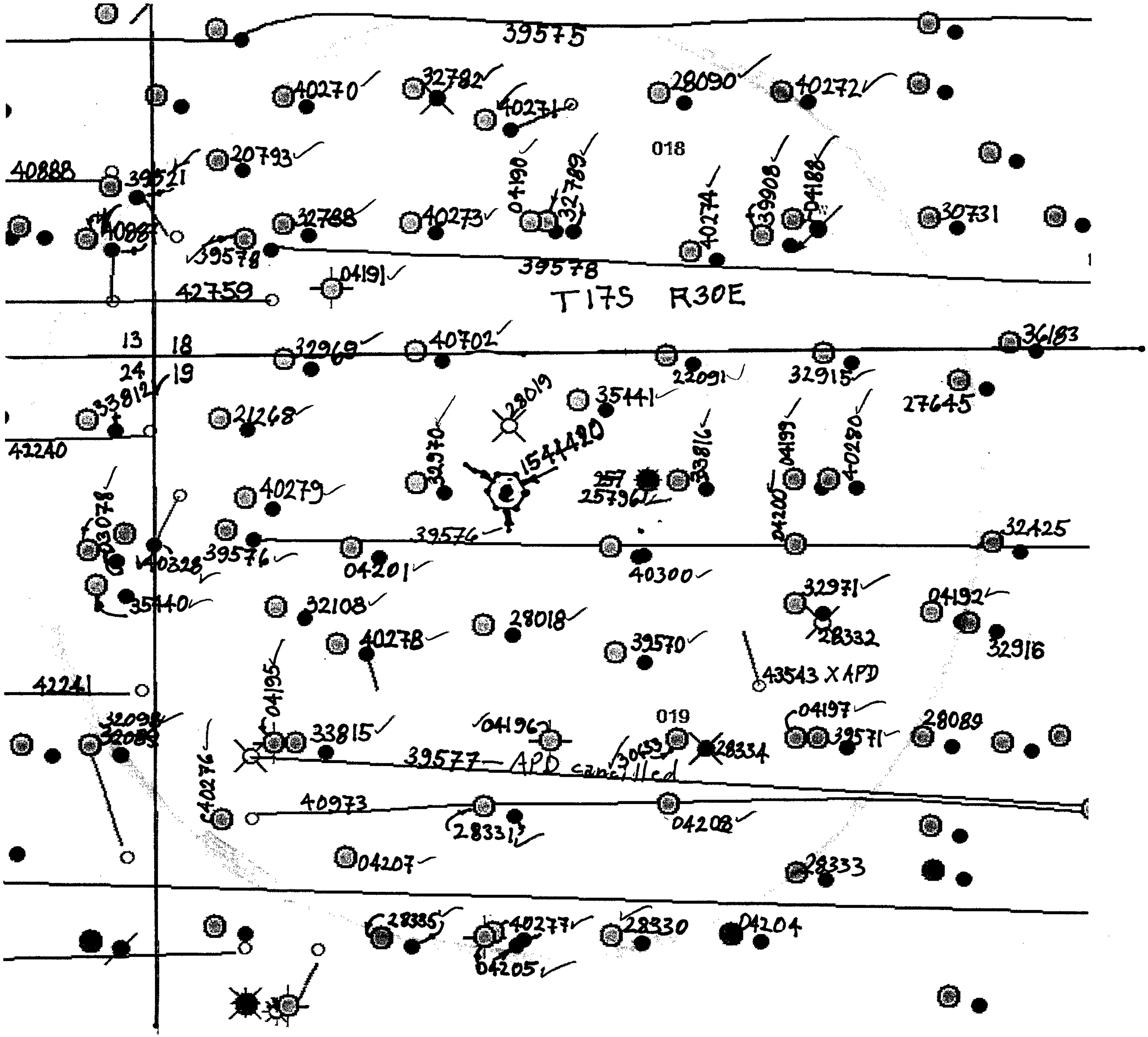
1. **Begin wellbore operations within 90 days of these conditions of approval for the processed Electronic Submission #396987 notice of intent or request an extension.**
2. **Operator is required to have the BLM approved NOI procedure with applicable conditions of approval on location during this workover operation.**
3. Due to being within the Lesser Prairie Chicken habitat, this workover activity will be restricted to the hours of 9:00am through 3:00am for the period of March 1 through June 15.
4. Before adding, replacing, or repairing casing or a liner prior BLM approval of the design is required.
5. **Consider the well a commercial hydrocarbon producer of federal minerals until proven otherwise.**
6. Class II (production water injection) wells are **not permitted stimulation injection pressures** that exceed permitted wellhead pressure **(1200psig)**.
7. **Wellhead pressure through the proposed 3 ½" workstring or 4 ½" disposal tubing (ID greater than 2 ½") is restricted to 0.15 x the depth of the top perforation or 1200psig.**
8. Subsequent reports of acid stimulation injection pressures are to list maximum/minimum injection rate (BPM) and max/min stimulation injection pressures (psig).
9. **A minimum of 1000 barrels is to be withdrawn from the proposed disposal formation after recovering any stimulation load volumes. Reports of ten samples from the last 200bbls analyzed for hydrocarbons and insitu salinity by a reputable laboratory. Obtain BLM agreement prior using the well as a disposal well.**
10. **BLM may witness the swabbing procedure. Notify pswartz@blm.gov, 575-200-7902 twenty-four hours prior to the 10 samples taken.**
11. **Provide statements of evidence that paying quantities of hydrocarbons are not produced when the well has a pumped off fluid level. Include an estimated insitu water salinity based the open hole logs in the subsequent completion sundry.**
12. Accompany a request for increased wellhead pressures with a BLM designed "Step Rate Test:" conducted after 90 days of stabilized disposal wellhead pressures and rates. A request for increased wellhead pressures requires a "Step Rate Test" that clearly indicates a wellhead pressure of +50psig below frac pressure for the wellbore's disposal formation. **PRIOR to a Step Rate Test BLM – CFO is requiring a Notice of Intent.**
13. Approval granted for disposal of water produced from the lease, communitization, or unit agreement of this well only.
14. Disposal fluid from another operator, another lease, another communization agreement, or another unit agreement require surface right-of-way **approvals** from the surface owner.

An inactive/shut-in well bore is a non-producing completion that is capable of "beneficial use" i.e. production in **paying quantities** or of service use.

15. Should "beneficial use" not be achieved submit for BLM approval a plan for plug and abandonment.

Well with a Packer - Operations

1) Conduct a Mechanical Integrity Test of the tubing/casing annulus after a tubing, packer or casing seal is established.
2) The minimum test pressure should be 500 psig for 30 minutes or 300 psig for 60 minutes, with a minimum 200 psig differential between tubing and casing pressure (at test time) but no more than 70% of casing burst pressure as described by Onshore Order 2.III.B.1.h. (The tubing or reservoir pressure may need reduced). Verify all annular casing vents plumbed to surface and those valves open to the surface during this pressure test. An alternate method for a BLM approved MIT is to have the fluid filled system open to atmospheric pressure and have a loss of less than five barrels in 30 days witnessed by a BLM authorized officer.
3) Document the pressure test on a one hour full rotation chart recorder (calibrated within the last 6 months) registering within 35 to 75 per cent of its full range. Greater than 10% pressure leakoff viewed as a failed MIT. Less than 10% pressure leakoff will be evaluated site specifically and may restrict injection approval.
4) Twenty-four hours before the test arrange for BLM to witness. In Eddy County phone 575-361-2822.
5) Accompany a request for increased wellhead pressures with a step rate test. PRIOR to a Step Rate Test BLM – CFO is requiring a Notice of Intent.
6) Class II (production water injection) wells are not permitted stimulation injection pressures that exceed frac pressure.
7) Report unexplained significant variations of rate or pressure within 5 days of notice.
8) Monitoring for communication with injection fluid or loss of casing integrity of the casing/tubing annulus is required. A BLM inspector may request verification of a full annular fluid level at any time.
9) A "Best Management Practice" is to maintain the annulus full of packer fluid at atmospheric pressure. Equipment that will display on site, continuous open to the air fluid level above the casing vent is necessary to achieve this goal.
10) Excessive (+5 bbls/month) gain or loss of annular fluid volume requires notification within 24 hours. Cease injection and maintain production casing and tubing pressure near 0psia. Notify the BLM's authorized officer ("Paul R. Swartz" <pswartz@blm.gov>, cell phone 575-200-7902). If there is no response phone 575-361-2822.



T17S
R29E
T17S R30E
13
18
24
19
018
019
39575
40270
32782
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20793
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04190
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39576
04200
32425
40328
04201
40300
35440
32108
32971
04192
28018
28332
40278
39570
32916
43543 X APD
42241
04195
32098
32089
33815
04196
04197
28089
39571
39577 — APD cancelled
28334
40276
40973
28331
04208
04207
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40277
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04204
04205

There are sixtyseven wellbores within a half mile of the Proposed Disposal Well. The proposed well will need to be confirmed structurally sound by a federal APD for completion purposes. Two plugged wells penetrate the proposed disposal formations. See well summary spread sheet below. Potential horizontal lateral well completion conflicts have been indicated and the near wellbore distance computed. At this time BLM has small concerns for this well's use as a water disposal well.

Operator: COG Operating LLC
Well: Ronco - 01
300... API: 1544420
Legal Surface Loc: T17S-R30E,19.600n1650w
@ Measured T.D.: 9300

C-108 BLM Index Tag #: CC10
BLM Review Date: 12/13/2017
NMOCD Form C-108 Date: 05/10/2017
Administrative Order(s): SWD-1677, 06/12/17
Formation, Depth, Press: Cisco/Canyon, 8630-9650, 1726psig, 3.5"tbg
WDW Right of Way No: N.A.

Estate - Sfc/Mnrls/Lse: F\F\F
Surface Lease: LC028793a
Com Agreement No:
Unit Agreement No:

Well #	Short API#	Estate Sfc/Mn/Lse	SPUD Date	Status	Date Plugged	9650 9430 VTD	Depth Conflict	TOC	± Direction from WDW Wellhead	± Dist from WDW Wellhead	VWDW to Lateral(s) ±Horz Short Dist to Lateral top P Wtr Inj	±slope Dist btm P Wtr Inj	±slope Dist	Evaluate disposal formation isolation from existing and potential productive formations. Confirm casing cement tops of existing wells that penetrate the proposed disposal interval are a minimum of 200ft above that interval. Consider and insure adequate isolation of vertical and calculated short distances from the proposed disposal entry to wells whose surface/bottom hole location is within the one half mile buffer.
Ronco-01	**1544420**	**F/F/F**	**10/31/17**	**NOI-WDW**		**9300**		**320**						
BURCH KEELY UNIT-360	1532970	F\F\F	12/30/03	POW		4730			S80ºW-	335				
BURCH KEELY UNIT-403	1535441	F\F\F	3/31/07	POW		4693			N54ºE-	594				
BURCH KEELY UNIT-588	1540702	F\F\F	3/4/13	POW		4675			N29ºW-	694				
BURCH KEELY UNIT-914	1540300	F\F\F	7/28/12	POW		4819			S59ºE-	751				
BURCH KEELY UNIT-52	1504201	F\F\F	9/21/37	POW		3157			S60ºW-	767				
BURCH KEELY UNIT-239	1528018	F\F\F	8/18/94	POW		4808			S-	790				
GRAYBURG DEEP UNIT-10	1525796	F\F\F	11/3/87	PGW	07/12/10	11240	Yes		S86ºE-	832				Cement plugs set from 10,618', 9576', 8425' & 7650'.
BURCH KEELY UNIT-379	1533816	F\F\F	11/23/05	POW		4710			S87ºE-	1093				
BURCH KEELY UNIT-651	1540278	F\F\F	7/5/13	POW		4672			S40ºW-	1137				
BURCH KEELY UNIT-643	1539570	F\F\F	1/6/12	POW		4660			S36ºE-	1144				
BURCH KEELY UNIT-359	1532969	F\F\F	12/18/03	POW		4728			N60ºW-	1145				
BURCH KEELY UNIT-53	1522091	F\F\F	6/19/77	POW		3615			N61ºE-	1184				
BURCH KEELY UNIT-30	1504191	F\F\F	7/2/71	Abd	11/23/94	3316			N39ºW-	1192				
BURCH KEELY UNIT-652	1540279	F\F\F	6/24/12	POW		4802			S84ºW-	1197				
BURCH KEELY UNIT-322	1532108	F\F\F	12/2/01	POW		4737			S57ºW-	1245				
BURCH KEELY UNIT-29	1504190	F\F\F	11/1/49	POW		2700			N12ºE-	1284				
BURCH KEELY UNIT-355	1532789	F\F\F	9/8/03	POW		4740			N15ºE-	1302				
BURCH KEELY UNIT-584	1540273	F\F\F	6/6/12	POW		4672			N16ºW-	1309				
BURCH KEELY UNIT-963H	1539576	F\F\F	1/20/12	POW		4848			S78ºW-	1325	408	3804	4819	
BURCH KEELY UNIT-51	1521268	F\F\F	7/25/74	POW		3300			N79ºW-	1347				
BURCH KEELY UNIT-59	1504196	F\F\F	7/19/33	POW	12/06/94	3660			S14ºE-	1419				
BURCH KEELY UNIT-585	1540274	F\F\F	7/20/12	POW		4678			N47ºE-	1600				
BURCH KEELY UNIT-354	1532788	F\F\F	9/4/03	POW		4719			N39ºW-	1602				
Ongard-8	1504200	F\F\F	8/20/37	POW	08/13/92	3226			S76ºE-	1608				
BURCH KEELY UNIT-388	1533815	F\F\F	1/5/06	POW		4691			S35ºW-	1670				
BURCH KEELY UNIT-54	1504199	F\F\F	11/6/49	POW		3645			S88ºE-	1671				
BURCH KEELY UNIT-945H	1539578	F\F\F	12/6/12	POW		4868			N45ºW-	1676	1469	4039	5003	

Operator: COG Operating LLC
Well: Ronco - 01
300... API: 1544420
Legal Surface Loc: T17S-R30E,19.600n1650w
@ Measured T.D.: 9300

C-108 BLM Index Tag #: CC10
BLM Review Date: 12/13/2017
NMOCD Form C-108 Date: 05/10/2017
Administrative Order(s): SWD-1677, 06/12/17
Formation, Depth, Press: Cisco/Canyon, 8630-9650, 1726psig, 3.5"tbg
WDW Right of Way No: N.A.

Estate - Sfc/Mnrls/Lse: F\F\F
Surface Lease: LC028793a
Com Agreement No:
Unit Agreement No:

VWDW to Lateral(s) Evaluate disposal formation isolation from existing and potential productive formations. Confirm casing cement tops of existing wells that penetrate the proposed disposal interval are a minimum of 200ft above that interval. Consider and insure adequate isolation of vertical and calculated short distances from the proposed disposal entry to wells whose surface/bottom hole location is within the one half mile buffer.

Well#	Short API#	Estate Sfc/Mn/Lse	SPUD Date	Status	Date Plugged	9650 8430 VTD'	Depth Conflict	TOC	± Direction from WDW Wellhead	± Dist from WDW Wellhead	±Horz Dist to Lateral top P Wtr Inj	±slope Dist btm P Wtr Inj	±slope Dist
BURCH KEELY UNIT-945H	1539578	F\F\F	12/6/12	POW		4868			N45ºW-	1676	1469	4039	5003
BURCH KEELY UNIT-304	1530633	F\F\F	09/11/00	POW		4758			S35ºE-	1684			
BURCH KEELY UNIT-238	1528331	P\F\F	06/30/96	POW		4725			S-	1710			
BURCH KEELY UNIT-60	1504195	F\F\F	02/16/39	Abd	03/01/95	3100			S38ºW-	1734			
BURCH KEELY UNIT-581	1540271	F\F\F	06/21/12	POW		4684			N1ºE-	1780			
BURCH KEELY UNIT-362	1532971	F\F\F	01/11/04	POW		4836			S68ºE-	1809			
BURCH KEELY UNIT-640	1540328	F\F\F	12/23/12	POW		4847			S81ºW-	1825			
BURCH KEELY UNIT-654	1540280	F\F\F	07/02/12	POW		4828			S89ºE-	1846			
BURCH KEELY UNIT-357	1532915	F\F\F	09/23/03	POW		4720			N73ºE-	1913			
BURCH KEELY UNIT-586	1539908	F\F\F	07/13/12	POW		4665			N53ºE-	1924			
BURCH KEELY UNIT-346	1532782	F\F\F	08/12/03	POW		4715			N10ºW-	1974			
BURCH KEELY UNIT-387	1533812	F\F\F	11/19/05	POW		4640			N83ºW-	1998			
Ongard-24	1504208	F\F\	01/23/49	Abd	06/25/81	3183			S32ºE-	1999			
BURCH KEELY UNIT-50	1503078	F\F\F	10/01/49	POW		3556			S79ºW-	2018			
BURCH KEELY UNIT-402	1535440	F\F\F	07/13/07	POW		4662			S74ºW-	2022			
BURCH KEELY UNIT-31	1520793	F\F\F	03/28/73	POW		3300			N40ºW-	2067			
Ongard-23	1504207	F\F\	03/31/49	Abd	06/19/81	3150			S20ºW-	2084			
BURCH KEELY UNIT-28	1504188	F\F\F	09/14/43	POW		4243			N53ºE-	2092			
BURCH KEELY UNIT-347	1528090	F\F\F	08/11/03	POW		4705			N26ºE-	2109			
BURCH KEELY UNIT-580	1540270	F\F\F	06/29/12	POW		4680			N28ºW-	2151			
Ongard-5	1504197	F\F\	01/24/34	Abd	02/16/76	3204			S51ºE-	2166			
BURCH KEELY UNIT-626	1540276	F\F\F	11/29/14	POW		4792			S37ºW-	2205			
BURCH KEELY UNIT-644	1539571	F\F\F	11/28/11	POW		4816			S53ºE-	2252			
BURCH KEELY UNIT-906	1540887	F\F\F	10/14/14	POW		4765			N59ºW-	2313			
BURCH KEELY UNIT-542	1539521	F\F\F	05/25/12	POW		4663			N52ºW-	2361			
BURCH KEELY UNIT-646	1540277	P\F\F	07/19/12	POW		4668			S1ºE-	2368			
BURCH KEELY UNIT-93	1504205	P\F\F	1949	ABD	03/06/95	3148			S-	2390			
BURCH KEELY UNIT-321	1532098	F\F\F	11/21/01	POW		4664			S56ºW-	2408			
BURCH KEELY UNIT-247	1528335	P\F\F	09/09/95	POW		4715			S13ºW-	2446			

Operator: COG Operating LLC
Well: Ronco - 01
300... API: 1544420
Legal Surface Loc: T17S-R30E,19.600n1650w
@ Measured T.D.: T17S-R30E,19.600n1650w
Estate - Sfc/Mnrls/Lse: F\F\F
Surface Lease: LC028793a
Com Agreement No:
Unit Agreement No:

C-108 BLM Index Tag #: CC10
BLM Review Date: 12/13/2017
NMOCD Form C-108 Date: 05/10/2017
Administrative Order(s): SWD-1677, 06/12/17
Formation, Depth, Press: Cisco/Canyon, 8630-9650, 1726psig, 3.5"tbg
WDW Right of Way No: N.A.

Well#	Short API#	Estate Sfc/Mn/Lse	SPUD Date	Status	Date Plugged	9650 8120 VTD	Depth Conflict	TOC	± Direction from WDW Wellhead	± Dist from WDW Wellhead	VWDW to Lateral(s) ±Horz Dist to Lateral top P Wtr Inj	±slope Dist btm P Wtr Inj	±slope Dist	Evaluate disposal formation isolation from existing and potential productive formations. Confirm casing cement tops of existing wells that penetrate the proposed disposal interval are a minimum of 200ft above that interval. Consider and insure adequate isolation of vertical and calculated short distances from the proposed disposal entry to wells whose surface/bottom hole location is within the one half mile buffer.
BURCH KEELY UNIT-58	1504192	F\F\F	12/09/49	POW		3223			S73ºE-	2470				
BURCH KEELY UNIT-246	1528330	F\F\F	09/21/95	POW		4715			S15ºE-	2472				
BURCH KEELY UNIT-582	1540272	F\F\F	06/13/12	POW		4670			N41ºE-	2508				
BURCH KEELY UNIT-352	1532786	F\F\F	09/13/03	POW		4662			N41ºW-	2515				
BURCH KEELY UNIT-55	1521657	F\F\F	01/30/76	POW		3625			N81ºE-	2533				
BURCH KEELY UNIT-545	1540323	F\F\F	07/24/12	POW		4751			N83ºW-	2565				
BURCH KEELY UNIT-351	1532785	F\F\F	09/02/03	POW		4710			N8ºE-	2601				
BURCH KEELY UNIT-23	1520417	F\F\F	04/11/71	POW		3310			N8ºE-	2602				
GRAYBURG DEEP UNIT-18	1534905	F\F\F	06/18/06	Abd	06/26/09	11230	Yes	7937	S89ºW-	2602				Plugged from 7450' up. Only CIBPs isolate formation perfs below (no cmt plugs).
BURCH KEELY UNIT-943H	1539575	F\F\F	12/21/11	POW		4861			N31ºW-	2609	2601	4580	5450	
BURCH KEELY UNIT-32	1520398	F\F\F	03/23/71	POW		3300			N62ºW-	2631				
BURCH KEELY UNIT-49	1521265	F\F\F	10/20/75	POW		3550			N85ºW-	2654				
BURCH KEELY UNIT-358	1532916	F\F\F	09/25/03	POW		4822			S73ºE-	2658				
BURCH KEELY UNIT-234	1527652	F\F\F	05/28/94	POW		4650			S83ºW-	2664				
BURCH KEELY UNIT-297	1530731	F\F\F	09/14/99	POW		4730			N62ºE-	2671				
BURCH KEELY UNIT-262	1528333	F\F\F	12/15/96	POW		4740			S39ºE-	2671				
BURCH KEELY UNIT-577	1539524	F\F\F	04/28/12	POW		4656			N9ºW-	2685				
BURCH KEELY UNIT-244	1528089	F\F\F	09/26/94	POW		4740			S60ºE-	2687				
BURCH KEELY UNIT-328	1532425	F\F\F	10/19/02	POW		4823			S82ºE-	2688				
BURCH KEELY UNIT-61	1505911	F\F\F	03/15/62	POW		3084			S60ºW-	2691				
BURCH KEELY UNIT-282	1529722	P\F\F	01/15/98	POW		4796			S31ºW-	2691				
BURCH KEELY UNIT-95	1504204	F\F\F	11/01/49	Inj		3612			S30ºE-	2740				
BURCH KEELY UNIT-350	1532784	F\F\F	08/25/03	POW		4710			N21ºW-	2763				
BURCH KEELY UNIT-21	1520413	F\F\F	04/18/71	POW		3300			N22ºW-	2779				
BURCH KEELY UNIT-392	1533809	F\F\F	10/24/06	POW		4620			N64ºW-	2782				
BURCH KEELY UNIT-418	1536183	F\F\F	12/09/10	POW		4961			N78ºE-	2820				
BURCH KEELY UNIT-965H	1540973	F\F\F	02/09/13	POW		4767			S61ºE-	3610	3582	5268	6056	
BURCH KEELY UNIT-92	1504194	P\F\F	04/11/29	Abd	01/31/94	3142			S21ºW-	2895				
BURCH KEELY UNIT-578	1539539	F\F\F	02/25/13	POW		4640			N24ºE-	2941				

Operator: COG Operating LLC
Well: Ronco - 01
300... API: 1544420
Legal Surface Loc: T17S-R30E,19.600n1650w
@ Measured T.D.: 9300
Estate - Sfc/Mnrls/Lse: F\F\F
Surface Lease: LC028793a
Com Agreement No:
Unit Agreement No:

C-108 BLM Index Tag #: CC10
BLM Review Date: 12/13/2017
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Formation, Depth, Press: Cisco/Canyon, 8630-9650, 1726psig, 3.5"tbg
WDW Right of Way No: N.A.

Evaluate disposal formation isolation from existing and potential productive formations. Confirm casing cement tops of existing wells that penetrate the proposed disposal interval are a minimum of 200ft above that interval. Consider and insure adequate isolation of vertical and calculated short distances from the proposed disposal entry to wells whose surface/bottom hole location is within the one half mile buffer.

Well#	Short API#	Estate Sfc/Mn/Lse	SPUD Date	Status	Date Plugged	9650 9430 VTD	Depth Conflict	TOC	± Direction from WDW Wellhead	± Dist from WDW Wellhead	VWDW to Lateral(s) ±Horz Dist to Lateral top P Wtr Inj	±slope Dist btm P Wtr Inj	±slope Dist	
GRAYBURG DEEP-17	1534214	P\F\F	07/25/05	Abd	11/17/15	11259	Yes	7000	S24ºW-	2966	2600	2630	1611	Prod String TOC shows to be over 200ft above top disposal interval.
BURCH KEELY UNIT-657	1539567	F\F\F	05/18/12	POW		4672			S52ºE-	2974				
BURCH KEELY UNIT-534	1541562	F\F\F		XAPD					N39ºW-	2999				
BURCH KEELY UNIT-363	1532992	P\F\F	03/27/05	NOI-DHCM		4750			S12ºW-	3006				
BURCH KEELY UNIT-25	1523168	F\F\F	12/05/80	POW		3660			N50ºE-	3016				
BURCH KEELY UNIT-656	1540005	F\F\F	04/19/12	POW		4766			S63ºE-	3047				
BURCH KEELY UNIT-393	1534018	F\F\F	12/09/05	POW		4650			N80ºW-	3050				
BURCH KEELY UNIT-245	1528156	P\F\F	04/11/95	POW		4775			S-	3050				
BURCH KEELY UNIT-353	1532787	F\F\F	09/13/03	POW		4730			N33ºE-	3069				
BURCH KEELY UNIT-24	1520437	F\F\F	05/15/71	POW		3320			N33ºE-	3073				
BURCH KEELY UNIT-583	1539540	F\F\F	05/09/12	POW		4693			N60ºE-	3099				
BURCH KEELY UNIT-91	1503069	F\F\F	04/25/52	Inj		3613			S40ºW-	3104				
BURCH KEELY UNIT-94	1522092	F\F\F	07/23/77	Abd	05/23/05	3600			S13ºE-	3125				
BURCH KEELY UNIT-334	1532702	F\F\F	04/30/03	POW		4765			S53ºW-	3125				
BURCH KEELY UNIT-97	1504209	F\F\F	03/21/51	Inj		3240			S49ºE-	3145				
BURCH KEELY UNIT-541	1540662	F\F\F	02/18/13	POW		4650			N53ºW-	3153				
BURCH KEELY UNIT-370	1533558	F\F\F	01/12/05	POW		4850			S11ºE-	3158				
BURCH KEELY UNIT-349	1532783	F\F\F	08/20/03	POW		4710			N-	3215				
BURCH KEELY UNIT-48	1524977	F\F\F	10/23/84	POW		3400			S78ºW-	3227				
BURCH KEELY UNIT-22	1521658	F\F\F	01/22/76	Abd	12/02/03	3300			N6ºW-	3232				
BURCH KEELY UNIT-27	1504189	F\F\F	01/27/56	POW		4220			N68ºE-	3245				
BURCH KEELY UNIT-329	1532426	F\F\F	10/24/02	POW		4825			N47ºE-	3257				
BURCH KEELY UNIT-540	1540321	F\F\F	08/05/12	POW		4678			N71ºW-	3285				
BURCH KEELY UNIT-967H	1539579	P\F\F	03/10/12	POW		4777			S26ºW-	3287	3151	4977	5803	
BURCH KEELY UNIT-57	1504198	F\F\F	05/27/72	Abd	12/29/12	3702			S66ºE-	3293				
BURCH KEELY UNIT-327	1532430	F\F\F	09/29/02	POW		4750			S66ºW-	3298				
BURCH KEELY UNIT-225	1527645	F\F\F	05/14/94	POW		5050			N86ºE-	3331				
BURCH KEELY UNIT-229	1528155	F\F\F	06/07/96	POW		4800			S24ºE-	3331				
BURCH KEELY UNIT-361	1532991	F\F\F	02/04/04	POW		4812			S84ºE-	3340				