OCD Hobbs

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Form 3160-3
(March 2012)

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM088163

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

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

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.: AVION FEDERAL 301H (312816)

2. Name of Operator: COG OPERATING LLC (229137)

9. API Well No.: 30-025-44736

3a. Address: 600 West Illinois Ave Midland TX 79701

3b. Phone No. *(include area code)*: (432)683-7443

10. Field and Pool, or Exploratory: WILDCAT / BONE SPRING

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: NENE / 480 FNL / 330 FEL / LAT 32.2960922 / LONG -103.6550313

At proposed prod. zone: SESE / 200 FSL / 330 FEL / LAT 32.2834445 / LONG -103.6550253

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 22 / T23S / R32E / NMP

14. Distance in miles and direction from nearest town or post office*: 22 miles

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 200 feet

16. No. of acres in lease: 480

17. Spacing Unit dedicated to this well: 160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 942 feet

19. Proposed Depth: 8690 feet / 14543 feet

20. BLM/BIA Bond No. on file: FED: NMB000215

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3699 feet

22. Approximate date work will start*: 03/01/2017

23. Estimated duration: 30 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Mayte Reyes / Ph: (575)748-6945	11/17/2017

Title: Regulatory Analyst

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	04/23/2018

Title	Office
Supervisor Multiple Resources	CARLSBAD

Application approval 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.
Conditions of approval, if any, are attached.

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.

(Continued on page 2)

*(Instructions on page 2)

GCP Rec 5/7/18

APPROVED WITH CONDITIONS

Approval Date: 04/23/2018

KZ 05/09/18

* Missing Pages

Additional Operator Remarks

Location of Well

1. SHL: NENE / 480 FNL / 330 FEL / TWSP: 23S / RANGE: 32E / SECTION: 22 / LAT: 32.2960922 / LONG: -103.6550313 (TVD: 0 feet, MD: 0 feet)
   PPP: NENE / 330 FNL / 330 FEL / TWSP: 23S / RANGE: 32E / SECTION: 22 / LAT: 32.2965045 / LONG: -103.6550313 (TVD: 5930 feet, MD: 5930 feet)
   BHL: SESE / 200 FSL / 330 FEL / TWSP: 23S / RANGE: 32E / SECTION: 22 / LAT: 32.2834445 / LONG: -103.6550253 (TVD: 8690 feet, MD: 14543 feet)

BLM Point of Contact

Name: Sipra Dahal
Title: Legal Instruments Examiner
Phone: 5752345983
Email: sdahal@blm.gov

Approval Date: 04/23/2018

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Operator Certification Data Report

04/24/2018

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Mayte Reyes **Signed on:** 11/15/2017

Title: Regulatory Analyst

Street Address: 2208 W Main Street

City: Artesia **State:** NM **Zip:** 88210

Phone: (575)748-6945

Email address: Mreyes1@concho.com

Field Representative

Representative Name: Rand French

Street Address: 2208 West Main Street

City: Artesia **State:** NM **Zip:** 88210

Phone: (575)748-6940

Email address: rfrench@concho.com

Operator Name: COG OPERATING LLC

Well Name: AVION FEDERAL **Well Number:** 301H

Describe other minerals:

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: SINGLE WELL **Multiple Well Pad Name:** **Number:**

Well Class: HORIZONTAL **Number of Legs:**

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 22 Miles **Distance to nearest well:** 942 FT **Distance to lease line:** 200 FT

Reservoir well spacing assigned acres Measurement: 160 Acres

Well plat: COG_Avion_301H_C102_20171115162521.pdf

Well work start Date: 03/01/2017 **Duration:** 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	480	FNL	330	FEL	23S	32E	22	Aliquot NENE	32.2960922	-103.6550313	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 088163	3699	0	0
KOP Leg #1	480	FNL	330	FEL	23S	32E	22	Aliquot NENE	32.2960922	-103.6550313	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 088163	3699	0	0
PPP Leg #1	330	FNL	330	FEL	23S	32E	22	Aliquot NENE	32.2965045	-103.6550313	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 088163	-2231	5930	5930

tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

Choke Diagram Attachment:

COG_Avion_301H_2M_Choke_20171116160506.pdf

BOP Diagram Attachment:

COG_Avion_301H_2M_BOP_20171116160519.pdf

COG_Avion_301H_Flex_Hose_20171116160730.pdf

Pressure Rating (PSI): 3M **Rating Depth:** 8690

Equipment: Annular, Blind Ram, Pipe Ram. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold
Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP to the choke manifold. See attached for specs and hydrostatic test chart.
Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

Choke Diagram Attachment:

COG_Avion_301H_3M_Choke_20171116160809.pdf

BOP Diagram Attachment:

COG_Avion_301H_3M_BOP_20171116160817.pdf

COG_Avion_301H_Flex_Hose_20171116160827.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	1240	0	1240	-9411	-10581	1240	J-55	54.5	STC	1.99	1.26	DRY	7.61	DRY	7.61
2	INTERMEDIATE	12.25	9.625	NEW	API	Y	0	4900	0	4900	-9411	-21491	4900	L-80	40	LTC	1.2	1.72	DRY	5.73	DRY	5.73
3	PRODUCTION	8.75	5.5	NEW	API	N	0	14543	0	14543	-9411	-29318	14543	P-110	17	LTC	1.78	3.19	DRY	3.01	DRY	3.01

Operator Name: COG OPERATING LLC

Well Name: AVION FEDERAL **Well Number:** 301H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1240	550	1.75	13.5	962	50	Class C	4% Gel + 1% CaCl2
SURFACE	Tail		0	1240	250	1.34	14.8	335	50	Class C	2% CaCl2
INTERMEDIATE	Lead		0	4900	920	2	12.7	1840	50	Lead: 35:65:6 C Blend	As needed
INTERMEDIATE	Tail		0	4900	250	1.34	14.8	335	50	Tail: Class C + 2% CaCl	As needed
PRODUCTION	Lead		0	14543	530	2.5	11.9	1325	25	50:50:10 H Blend	As needed
PRODUCTION	Tail		0	14543	1620	1.24	14.4	2008	25	50:50:2 Class H Blend	As needed

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

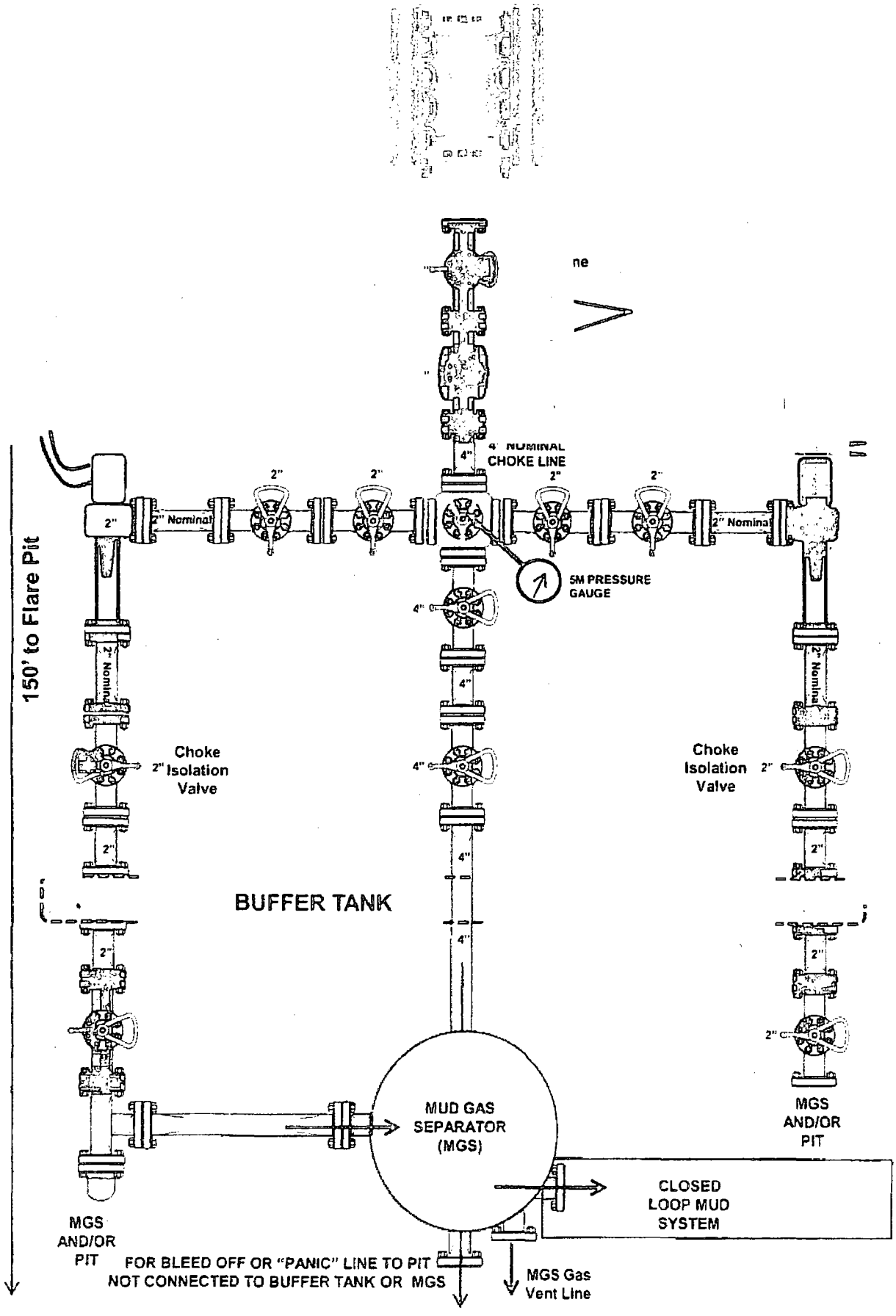
Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
4900	14543	OTHER : Cut Brine	8.6	9.3							Cut Brine
0	1240	OTHER : FW Gel	8.6	8.8							FW Gel
1240	4900	OTHER : Saturated Brine	10	10.1							Saturated Brine

M W CLOSED LOOP)



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	Odessa	Hose Assembly Type	Choke & Kill
MWH Sales Representative	Charles Ash	Certification	API 7K/FSL LEVEL2
Date Assembled	11/11/2016	Hose Grade	Mud
Location Assembled	OKC	Hose Working Pressure	100000
Sales Order #	308747	Hose Lot # and Date Code	12354-09/15
Customer Purchase Order #	345144	Hose I.D. (Inches)	3.5"
Assembly Serial # (Pick Ticket #)	371501	Hose O.D. (Inches)	5.87"
Hose Assembly Length	35 Feet	Armor (yes/no)	No

Fittings			
End A		End B	
Stem (Part and Revision #)	R3.5X64WB	Stem (Part and Revision #)	R3.5X64WB
Stem (Heat #)	A112669	Stem (Heat #)	A112669
Ferrule (Part and Revision #)	RF3.5X5750	Ferrule (Part and Revision #)	RF3.5X5750
Ferrule (Heat #)	41632	Ferrule (Heat #)	41632
Connection Flange Hammer Union Part	4-1/16 10K	Connection (Part #)	4-1/16 10K
Connection (Heat #)		Connection (Heat #)	
Nut (Part #)		Nut (Part #)	
Nut (Heat #)		Nut (Heat #)	
Dies Used	5.80"	Dies Used	5.80"

Hydrostatic Test Requirements		
Test Pressure (psi)	15,000	*Hose assembly was tested with ambient water temperature.*
Test Pressure Hold Time (minutes)	24 1/2	

Date Tested	Tested By	Approved By
11/11/2016	Richard Dix	Charles Ash

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

November 11, 2016

Customer: Odessa

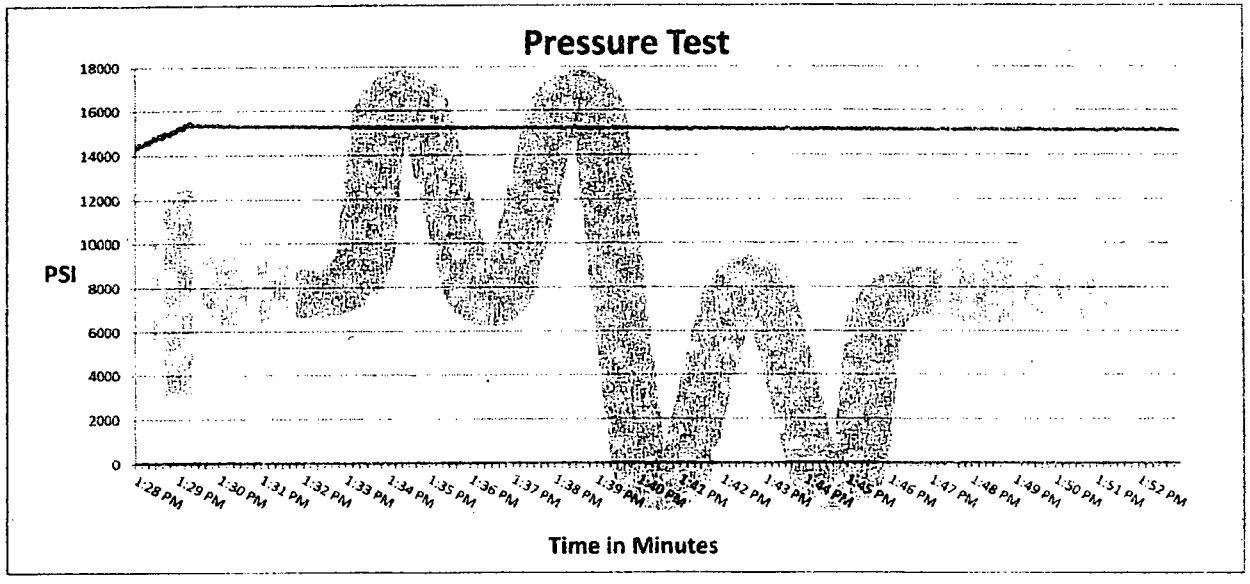
Pick Ticket #: 371501

Hose Specifications

Hose Type	Length
Ck	35'
I.D.	**O.D.**
3.5""	5.30"
Working Pressure	**Burst Pressure**
10000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4 1/16 10K	Swage
Die Size	**Final O.D.**
5.80"	5.83"
Hose Serial #	**Hose Assembly Serial #**
12354	371501



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	24 2/4 Minutes		15512 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: *Richard Davis*

x

Approved By: *Charles Ash*

x

Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	Odessa	Hose Assembly Type	Choke & Kill
MWH Sales Representative	Charles Ash	Certification	API 7K/FSL LEVEL2
Date Assembled	11/11/2016	Hose Grade	Mud
Location Assembled	OKC	Hose Working Pressure	100000
Sales Order #	308747	Hose Lot # and Date Code	12354-09/15
Customer Purchase Order #	345144	Hose I.D. (Inches)	3.5"
Assembly Serial # (Pick Ticket #)	371501	Hose O.D. (Inches)	5.87"
Hose Assembly Length	35 Feet	Armor (yes/no)	No

Fittings			
End A		End B	
Stem (Part and Revision #)	R3.5X64WB	Stem (Part and Revision #)	R3.5X64WB
Stem (Heat #)	A112669	Stem (Heat #)	A112669
Ferrule (Part and Revision #)	RF3.5X5750	Ferrule (Part and Revision #)	RF3.5X5750
Ferrule (Heat #)	41632	Ferrule (Heat #)	41632
Connection - Flange Hammer Union Part	4-1/16 10K	Connection (Part #)	4-1/16 10K
Connection (Heat #)		Connection (Heat #)	
Nut (Part #)		Nut (Part #)	
Nut (Heat #)		Nut (Heat #)	
Dies Used	5.80"	Dies Used	5.80"

Hydrostatic Test Requirements		
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.
Test Pressure Hold Time (minutes)	24 1/2	

Date Tested	Tested By	Approved By
11/11/2016	Richard Dix	Charles Ash

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

November 11, 2016

Customer: Odessa

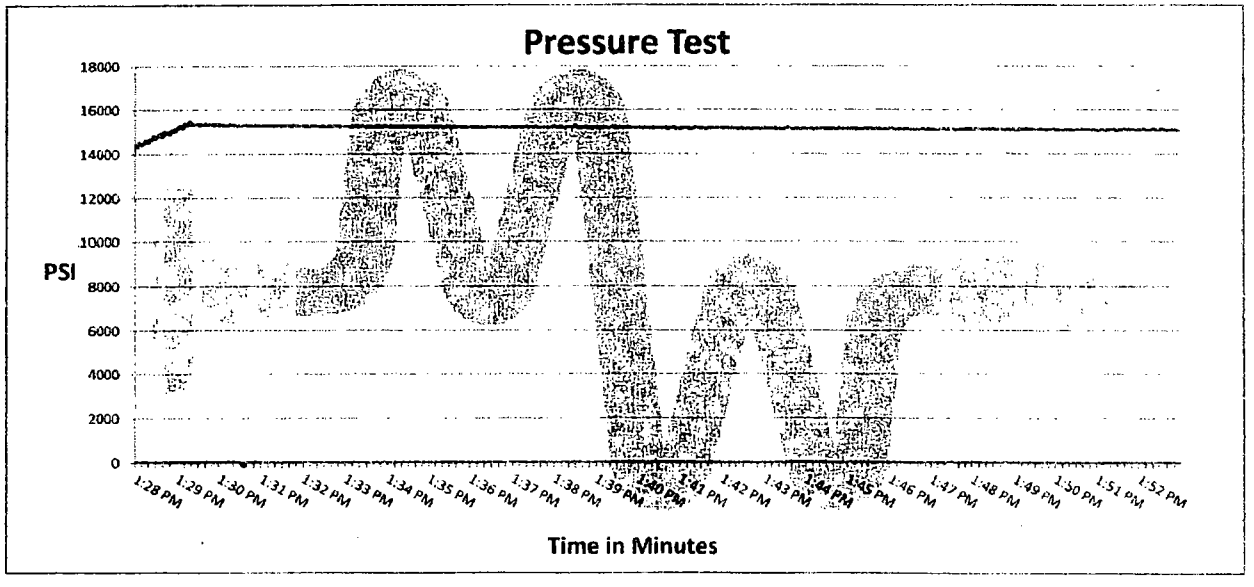
Pick Ticket #: 371501

Hose Specifications

Hose Type	Length
Ck	35'
I.D.	**O.D.**
3.5""	5.30"
Working Pressure	**Burst Pressure**
10000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4 1/16 10K	Swage
Die Size	**Final O.D.**
5.80"	5.83"
Hose Serial #	**Hose Assembly Serial #**
12354	371501



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	24 2/4 Minutes		15512 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: *Richard Davis*

x

Approved By: *Charles Ash*

x

Casing Program

Hole Size	Casing From	Casing To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17.5"	0	1240	13.375"	54.5	J55	STC	1.99	1.26	7.61
12.25"	0	4000	9.625"	40	J55	LTC	1.22	1.18	3.25
12.25"	4000	4900	9.625"	40	L80	LTC	1.20	1.72	5.73
8.75"	0	14,543	5.5"	17	P110	LTC	1.78	3.19	3.01
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing.to mitigate collapse. Intermediate burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface.
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Casing Program

Hole Size	Casing From	Casing To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17.5"	0	1240	13.375"	54.5	J55	STC	1.99	1.26	7.61
12.25"	0	4000	9.625"	40	J55	LTC	1.22	1.18	3.25
12.25"	4000	4900	9.625"	40	L80	LTC	1.20	1.72	5.73
8.75"	0	14,543	5.5"	17	P110	LTC	1.78	3.19	3.01
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing.to mitigate collapse. Intermediate burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface.
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

COG Operating, LLC - Avion Federal #301H

1. Geologic Formations

TVD of target	8,690' EOL	Pilot hole depth	NA
MD at TD:	14,543'	Deepest expected fresh water:	584'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1213	Water	
Top of Salt	1629	Salt	
Base of Salt	4625	Salt	
Lamar	4872	Salt Water	
Bell Canyon	4916	Salt Water	
Cherry Canyon	5777	Oil/Gas	
Brushy Canyon	7080	Oil/Gas	
Bone Spring Lime	8748	Oil/Gas	
U. Avalon Shale	9178	Oil/Gas	
L. Avalon Shale	9348	Oil/Gas	
1st Bone Spring Sand	9912	Not Penetrated	
2nd Bone Spring Sand	X	Not Penetrated	
3rd Bone Spring Sand	X	Not Penetrated	
Wolfcamp	X	Not Penetrated	

2. Casing Program

Hole Size	Casing From	Casing To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17.5"	0	1240	13.375"	54.5	J55	STC	1.99	1.26	7.61
12.25"	0	4000	9.625"	40	J55	LTC	1.22	1.18	3.25
12.25"	4000	4900	9.625"	40	L80	LTC	1.20	1.72	5.73
8.75"	0	14,543	5.5"	17	P110	LTC	1.78	3.19	3.01
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing.to mitigate collapse. Intermediate burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface.
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	550	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl2
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl2
Inter.	920	12.7	2.0	9.6	16	Lead: 35:65:6 C Blend
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl
5.5 Prod	530	11.9	2.5	19	72	Lead: 50:50:10 H Blend
	1620	14.4	1.24	5.7	19	Tail: 50:50:2 Class H Blend

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results
Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	50%
1st Intermediate	0'	50%
Production	3,500'	25% OH in Lateral (KOP to EOL) – 40% OH in Vertical

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	9-5/8" Int shoe	Saturated Brine	10 - 10.1	28-34	N/C
9-5/8" Int shoe	Lateral TD	Cut Brine	8.6 - 9.3	28-34	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
Y	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
Y	No Logs are planned based on well control or offset log information.
N	Drill stem test? If yes, explain.
N	Coring? If yes, explain.

Additional logs planned		**Interval**
N	Resistivity	Pilot Hole TD to ICP
N	Density	Pilot Hole TD to ICP
Y	CBL	Production casing (If cement not circulated to surface)
Y	Mud log	Intermediate shoe to TD
N	PEX	

APD ID: 10400024688 **Submission Date:** 11/17/2017

Operator Name: COG OPERATING LLC

Well Name: AVION FEDERAL **Well Number:** 301H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

COG_Avion_301H_Exist_Rd_20171115163152.pdf

Existing Road Purpose: ACCESS **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

COG_Avion_301H_Roads_20171115163216.pdf

New road type: TWO-TRACK

Length: 496 Feet **Width (ft.):** 30

Max slope (%): 33 **Max grade (%):** 1

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Operator Name: COG OPERATING LLC

Well Name: AVION FEDERAL **Well Number:** 301H

Water source use type: INTERMEDIATE/PRODUCTION CASING **Water source type:** OTHER

Describe type: Brine water will be obtained from the Malaga II Brine station located in Section 12. T23S. R28E.

Source latitude: **Source longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: COMMERCIAL

Water source transport method: TRUCKING

Source transportation land ownership: COMMERCIAL

Water source volume (barrels): 15000 **Source volume (acre-feet):** 1.9333965

Source volume (gal): 630000

Water source use type: STIMULATION, SURFACE CASING **Water source type:** OTHER

Describe type: Fresh water will be obtained from C-02520 GWWS water well located in Section 15, T23S, R325E.

Source latitude: **Source longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: PRIVATE

Water source transport method: PIPELINE

Source transportation land ownership: PRIVATE

Water source volume (barrels): 225000 **Source volume (acre-feet):** 29.000946

Source volume (gal): 9450000

Water source and transportation map:

COG_Avion_301H_Fresh_H2O_20171115163400.pdf

COG_Avion_301H_Brine_H2O_20171115163411.pdf

Water source comments: Fresh water will be obtained from C-02520 GWWS water well located in Section 15, T23S, R325E. Brine water will be obtained from the Malaga II Brine station located in Section 12. T23S. R28E.

New water well? NO

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Disposal location description: Trucked to an approved disposal facility

Waste type: GARBAGE

Waste content description: Garbage and trash produced during drilling and completion operations

Amount of waste: 125 pounds

Waste disposal frequency : Weekly

Safe containment description: Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility
Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL **Disposal location ownership:** COMMERCIAL FACILITY
Disposal type description:

Disposal location description: Trucked to an approved disposal facility

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Description of cuttings location Roll off cuttings containers on tracks

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Shinnery Oak/Mesquite grassland

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: N/A

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type: **Seed source:**

Seed name:

Source name: **Source address:**

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre: **Proposed seeding season:**

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Rand **Last Name:** French

Operator Name: COG OPERATING LLC

Well Name: AVION FEDERAL **Well Number:** 301H

Section 12 - Other Information

Right of Way needed? NO **Use APD as ROW?**

ROW Type(s):

ROW Applications

SUPO Additional Information:

Use a previously conducted onsite? YES

Previous Onsite information: Onsite completed on 10/26/2017 by Gerald Herrera (COG) and Jeff Robertson (BLM).

Other SUPO Attachment

COG_Avion_301H_Certif_20171115163308.pdf

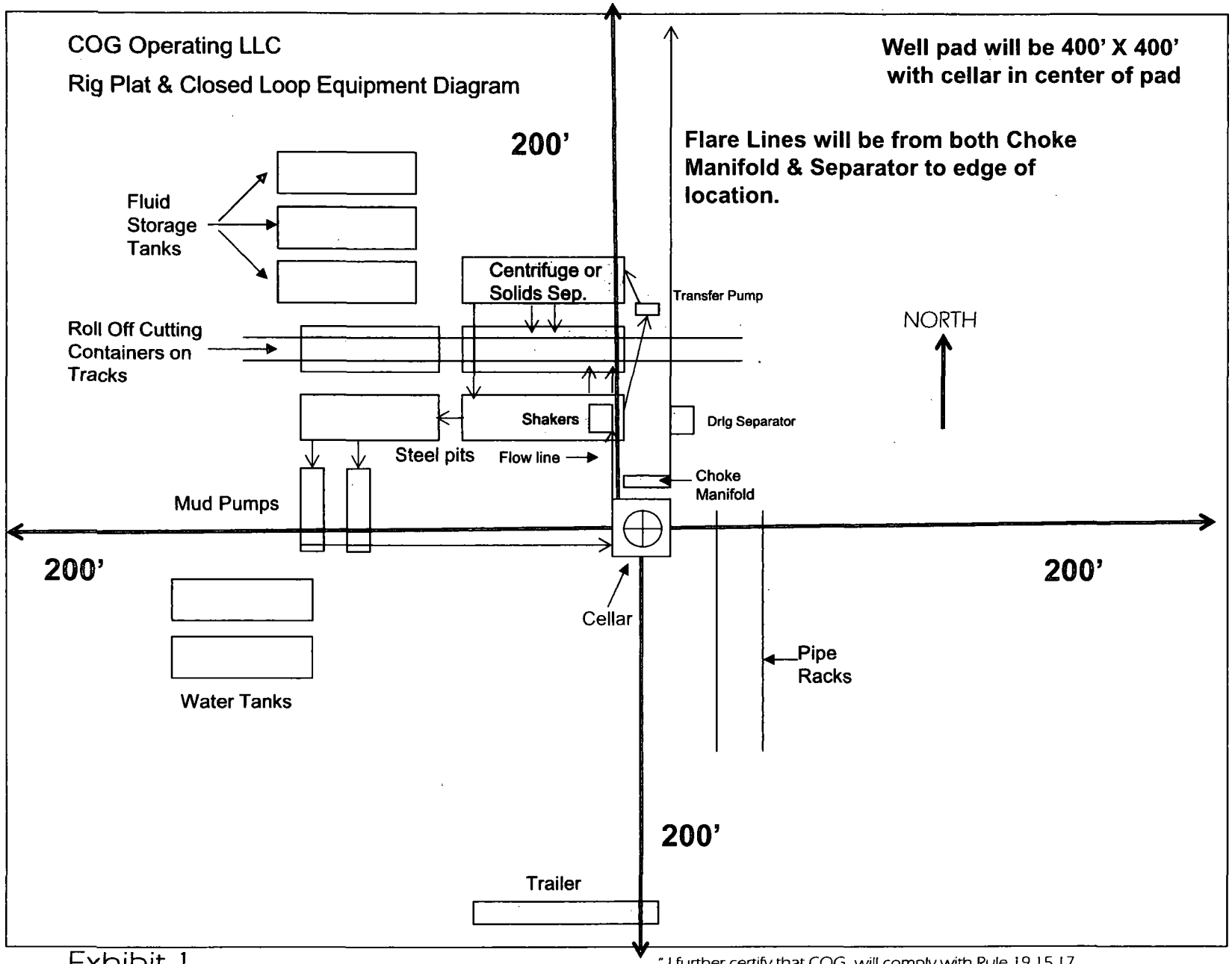


Exhibit 1

"I further certify that COG will comply with Rule 19.15.17 NMAC by using a Closed Loop System."

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Injection well type:

Injection well number: Injection well name:

Assigned injection well API number? Injection well API number:

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: PWD disturbance (acres):

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: PWD disturbance (acres):

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment: