

OCD Hobbs
HOBBS OCD

DEC 22 2016

RECEIVED

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

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM120907	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator COG Production LLC. (27955)		7. If Unit or CA Agreement, Name and No.	
3a. Address 2208 West Main Street Artesia, NM 88210		8. Lease Name and Well No. Eider Federal #13H (314193)	
3b. Phone No. (include area code) 575-748-6940		9. API Well No. 30-025-43514 (97964)	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 240' FNL & 2310' FEL Unit Letter B (NWNE) Sec 26-T24S-R32E At proposed prod. Zone 330' FSL & 2100' FEL Unit Letter O (SWSE) Sec 35-T24S-R32E		10. Field and Pool, or Exploratory WC-025 G-07 S243225S; Lower Bone Spring	
14. Distance in miles and direction from nearest town or post office* Approximately 17 miles from Jal		11. Sec., T.R.M. or Blk and Survey or Area Sec. 26 - T24S - R32E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. Unit line, if any) 330'		12. County or Parish Lea	
16. No. of acres in lease 1840		13. State NM	
17. Spacing Unit dedicated to this well 320			
18. Distance from location* to nearest well, drilling, completed, applied for, on this lease, ft. SHL: 1771' BHL: 336'		19. Proposed Depth TVD: 9,690' MD: 19,477'	
20. BLM/BIA Bond No. on file NMB000860 & NMB000845			
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3585.5' GL		22. Approximate date work will start* 10/1/2015	
		23. Estimated duration 30 days	

24. Attachments

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

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

25. Signature <i>Mayte Reyes</i>	Name (Printed/Typed) Mayte Reyes	Date 7-6-15
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Regulatory Analyst	
Approved by (Signature) <i>/s/Cody Layton</i>	Name (Printed/Typed) Cody Layton
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE

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)

Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

K2

COG Production LLC, Eider Federal 13H

1. Geologic Formations

TVD of target	9690'	Pilot hole depth	NA
MD at TD:	19477'	Deepest expected fresh water:	Not Present

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1106'	Water	
Top of Salt	1405'	Salt	
Lamar Lime	4942'	Barren	
Delaware Group	4977'	Oil/Gas	Possible lost circ
Bone Spring	8858'	Oil/Gas	
L Avalon Shale	9389'	Target Zone	
1 st Bone Spring Sand	9990'	Oil/Gas	Will not penetrate

2. Casing Program

See COA

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0'	1140' 1250'	13.375"	54.5	J55	STC	1.91	1.16	7.54
12.25"	0'	4880' 4960'	9.625"	40	L80	BTC	1.32	1.25	4.62
8.75"	0'	19477'	5-1/2"	17	P110	BTC	1.63	2.32	1.65D
BLM Minimum Safety Factor							1.125	1.00	1.6 Dry 1.8 Wet

- All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h
- BLM standard formulas were used on all SF calculations.
- Used 9.1 PPG for pore pressure calculations

COG Production LLC, Eider Federal 13H

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

2. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	490	13.5	1.75	9.2	13	Lead: Class C + 4% Gel + 2% CaCl ₂
	275	14.8	1.34	6.4	6	Tail: Class C + 2% CaCl ₂
Inter.	1325	12.9	1.92	10.0	12	Lead: Class C Lite (65:35:6) + 4% Salt + 5# Kolseal
	200	14.8	1.34	6.4	6	Tail: Class C
Prod.	915	10.3	3.52	21.3	75	Lead: Halliburton Tuned Lite w/ 2# kolseal, 1.5# salt, 1/4# D-Air 5000, 1/8# PEF, etc
	2440	14.4	1.25	5.7	22	Tail: 50:50:2 H blend (FR, Retarder, FL adds as necessary)

Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

COG Production LLC, Eider Federal 13H

Casing String	TOC	% Excess
Surface	0'	43%
Intermediate	0'	102%
Production	0'	34%

Pilot hole depth: NA

KOP: 9213'

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	2M	Annular	x	50% of working pressure
			Blind Ram		2M <i>See COA</i>
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other *		

* Actual equipment is 13-5/8" 5M Hydril Annular, will use for 2M WP System.

** - Actual equipment is 13-5/8" 5M Hydril Annular & 13-5/8" 10M Cameron triple ram, will use for 3M WP System.

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. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

COG Production LLC, Eider Federal 13H

N	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
	Are anchors required by manufacturer? No.
N	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. See attached schematic.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. shoe	FW Gel	8.6 – 9.0	28-34	N/C
Surf csg	Int shoe	Saturated Brine	10.0 - 10.2	28-34	N/C
Int shoe	TMD	Cut Brine	8.8 - 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?	Pason PVT
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6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	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.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
X	Mud log	Production

COG Production LLC, Eider Federal 13H

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4585 psi – L Avalon Shale (9690' TVD)
Abnormal Temperature	No

Mitigation measure for abnormal conditions.

- Lost circulation material/sweeps/mud scavengers.
- Maintain stock of LCM and weighting materials onsite.

See COA
Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N	H2S is present
Y	H2S Plan attached

8. Other facets of operation

Is this a walking operation? Yes. *No, if operator is dwelling multiple well, please submit Sunday*
Will be pre-setting casing? No.
Will well be hydraulically fractured? Yes.

Attachments

- Directional Plan
- BOP & Choke Schematics
- C102 and supporting maps
- Rig plat
- H2S schematic
- H2S contingency plan
- Interim reclamation plat
- Variance for Flex Hose

Eider Federal #13H

FID	OPERATOR	WELL_NAME	LATITUDE	LONGITUDE	API	SECTION	TOWNSHIP	RANGE	FTG_NS	NS_CD	FTG_EW	EW_CD	TVD_DEPTH	COMPL_STAT
0	MCI OPERATING OF NM, LLC	U S SMELTING FEDERAL 003	32.201227	-103.656146	3002508159	22	24.05	32E	1980 S		660 E		5005	Active
1	MCI OPERATING OF NM, LLC	U S SMELTING FEDERAL SWD 005	32.198509	-103.655079	3002508161	22	24.05	32E	990 S		330 E		4995	Active
2	CURTIS HANKAMER	ERNEST FEDERAL 001	32.20489	-103.651851	3002508162	23	24.05	32E	1980 N		660 W		5020	Plugged
3	SID W RICHARDSON INC	DELBASIN FEDERAL 001	32.168566	-103.65192	3002508165	35	24.05	32E	660 S		660 W		4979	Plugged
4	ROBERT B HOLT	ANDEE USA 001	32.183157	-103.634815	3002521801	25	24.05	32E	660 S		660 W		5038	Plugged
5	RALPH E WILLIAMSON	GRAHAM FEDERAL 001	32.197584	-103.660442	3002524929	22	24.05	32E	660 S		1980 E		4957	Plugged
6	RALPH E WILLIAMSON	WRIGHT FEDERAL 001	32.193955	-103.660448	3002524948	27	24.05	32E	660 N		1980 E		4937	Plugged
7	RALPH E WILLIAMSON	WRIGHT FEDERAL 002	32.190327	-103.660455	3002526360	27	24.05	32E	1980 N		1980 E		4885	Plugged
8	DEVON ENERGY PRODUCTION COMPANY, LP	FEDERAL BM 001	32.190445	-103.630503	3002527003	25	24.05	32E	1980 N		1980 W		0	Plugged
9	ROBERT H FORREST JR OIL LLC	EXXON 23 FEDERAL 002	32.205792	-103.652921	3002527834	23	24.05	32E	1650 N		330 W		5013	Active
10	EXXON CORP	JACKSON FEDERAL 001	32.193986	-103.651872	3002528242	26	24.05	32E	660 N		660 W		9350	Plugged
11	EXXON CORP	JACKSON FEDERAL 002	32.186754	-103.643378	3002528935	26	24.05	32E	1980 S		1980 E		5100	Plugged
12	EXXON CORP	JACKSON FEDERAL 004	32.17948	-103.647614	3002529212	35	24.05	32E	660 N		1980 W		5100	Plugged
13	CIMAREX ENERGY CO.	DOUBLE X 25 FEDERAL 003H	32.19498	-103.630732	3002540764	25	24.05	32E	330 N		1905 W		0	New (Not drilled or compl)
14	CIMAREX ENERGY CO.	DOUBLE X 25 FEDERAL 004	32.194981	-103.630245	3002540690	25	24.05	32E	330 N		2055 W		10832	New (Not drilled or compl)
15	DEVON ENERGY PRODUCTION COMPANY, LP	BELL LAKE 24 FEDERAL 001H	32.196426	-103.634771	3002541182	24	24.05	32E	200 S		660 W		10991	New (Not drilled or compl)
16	YATES PETROLEUM CORPORATION	BASILISK BQS STATE COM 001H	32.167729	-103.630582	3002540054	36	24.05	32E	330 S		1980 W		13665	New (Not drilled or compl)
17	CIMAREX ENERGY CO.	DOUBLE X 25 FEDERAL 001H	32.194968	-103.635019	3002540762	25	24.05	32E	330 N		585 W		0	New (Not drilled or compl)
18	CIMAREX ENERGY CO.	DOUBLE X 25 FEDERAL 002H	32.19497	-103.634532	3002540763	25	24.05	32E	330 N		735 W		0	New (Not drilled or compl)
19	CIMAREX ENERGY CO.	DOUBLE X 25 FEDERAL 009H	32.194969	-103.634776	3002541417	25	24.05	32E	330 N		660 W		0	New (Not drilled or compl)
20	COG PRODUCTION, LLC	GOLD COAST 26 FEDERAL 001H	32.18224	-103.638033	3002540896	26	24.05	32E	330 S		330 E		99	New (Not drilled or compl)
21	COG PRODUCTION, LLC	DOS XX 27 FEDERAL COM 001H	32.194577	-103.655444	3002540090	27	24.05	32E	440 N		440 E		13684	New (Not drilled or compl)
22	COG PRODUCTION, LLC	GADWALL 35 FEDERAL 001H	32.180829	-103.640181	3002540364	35	24.05	32E	180 N		990 E		14134	New (Not drilled or compl)
23	YATES PETROLEUM CORPORATION	BASILISK BQS STATE COM 002H	32.16739	-103.633408	3002542284	36	24.05	32E	210 S		1110 W		0	New (Not drilled or compl)
24	COG PRODUCTION, LLC	EIDER FEDERAL 002H	32.167304	-103.642843	3002541813	35	24.05	32E	190 S		1795 E		0	New (Not drilled or compl)
25	COG PRODUCTION, LLC	TREASURE ISLAND FEDERAL 002H	32.196365	-103.642893	3002541777	23	24.05	32E	190 S		1840 E		10961	New (Not drilled or compl)
26	COG PRODUCTION, LLC	TREASURE ISLAND FEDERAL 001H	32.196387	-103.63815	3002541776	23	24.05	32E	190 S		380 E		10722	New (Not drilled or compl)
27	CIMAREX ENERGY CO.	DOUBLE X 25 FEDERAL 010H	32.194981	-103.630488	3002541899	25	24.05	32E	330 N		1980 W		0	New (Not drilled or compl)
28	COG OPERATING LLC	GOLD COAST 26 FEDERAL SWD 001	32.187649	-103.646525	3002541570	26	24.05	32E	2310 S		2310 W		0	New (Not drilled or compl)
29	YATES PETROLEUM CORPORATION	BASILISK BQS STATE COM 003H	32.167382	-103.635714	3002541988	36	24.05	32E	210 S		400 W		0	New (Not drilled or compl)
30	COG PRODUCTION, LLC	GADWALL 35 FEDERAL 005H	32.167319	-103.638248	3002542291	35	24.05	32E	190 S		380 E		10900	New (Not drilled or compl)



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,

C=the file is (quarters are 1=NW 2=NE 3=SW 4=SE)

closed) (quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01932	C	ED		3	1	12	24S	32E		628633	3567188*	492		
C 02350		ED		4	3	10	24S	32E		625826	3566333*	60		
C 03527 POD1	C	LE		1	2	3	03	24S	32E	625770	3568487	500		
C 03528 POD1	C	LE		1	1	2	15	24S	32E	626040	3566129	541		
C 03530 POD1	C	LE		3	4	3	07	24S	32E	620886	3566156	550		
C 03555 POD1	C	LE		2	2	1	05	24S	32E	622709	3569231	600	380	220

Average Depth to Water: **380 feet**

Minimum Depth: **380 feet**

Maximum Depth: **380 feet**

Record Count: 6

PLSS Search:

Township: 24S

Range: 32E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



New Mexico Office of the State Engineer Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 35

Township: 24S

Range: 32E



New Mexico Office of the State Engineer **Water Column/Average Depth to Water**

No records found.

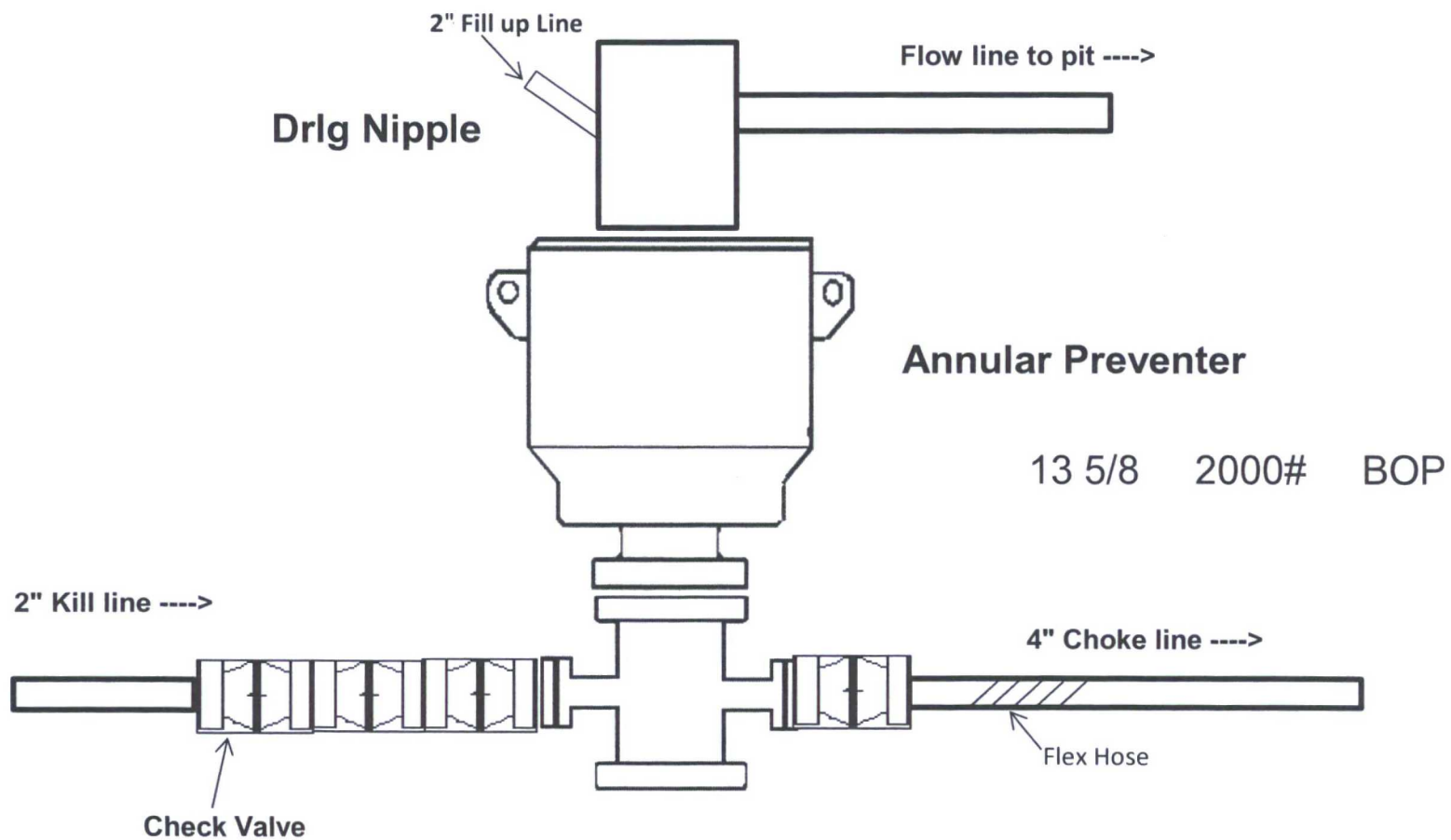
PLSS Search:

Section(s): 26

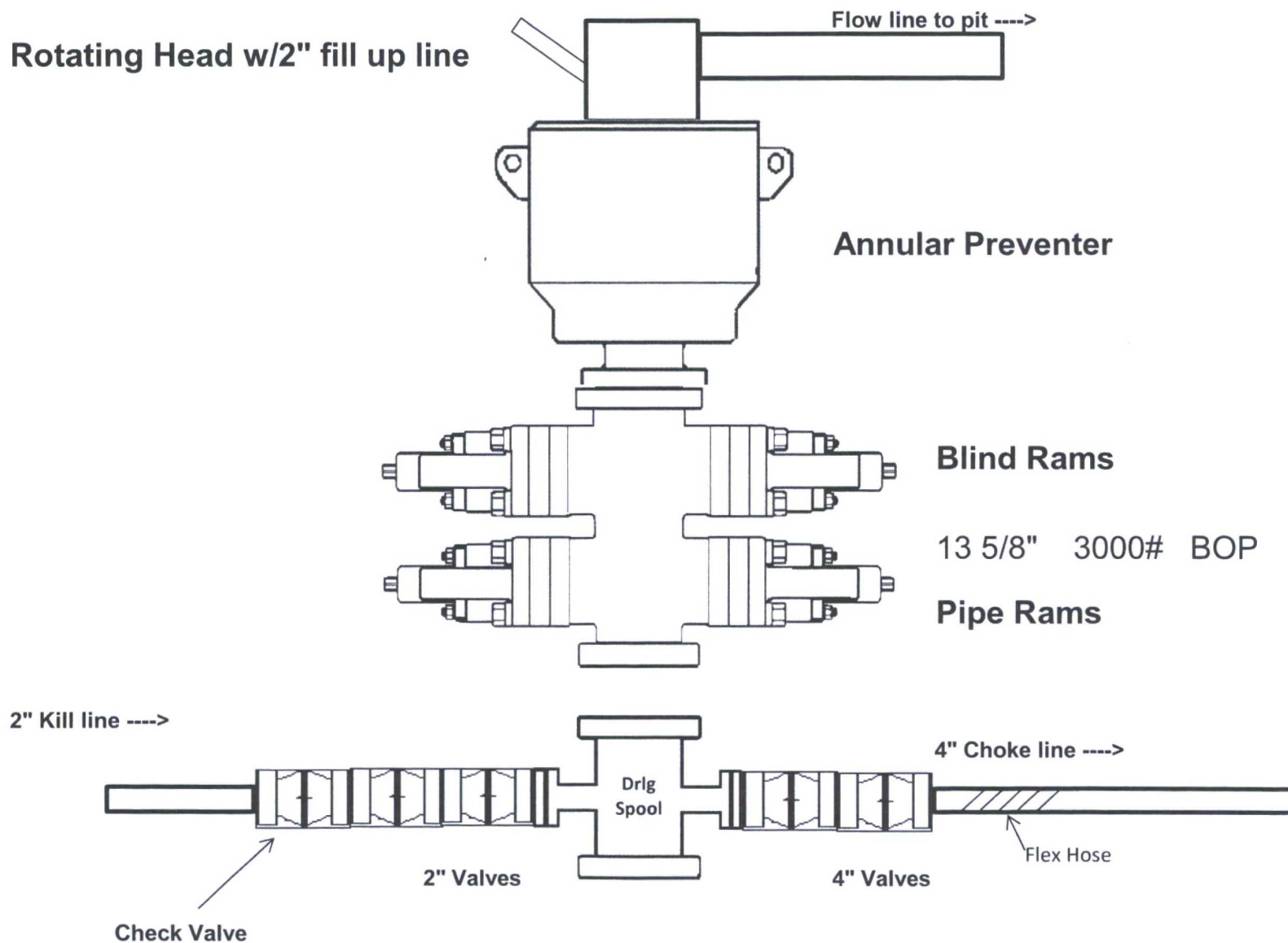
Township: 24S

Range: 32E

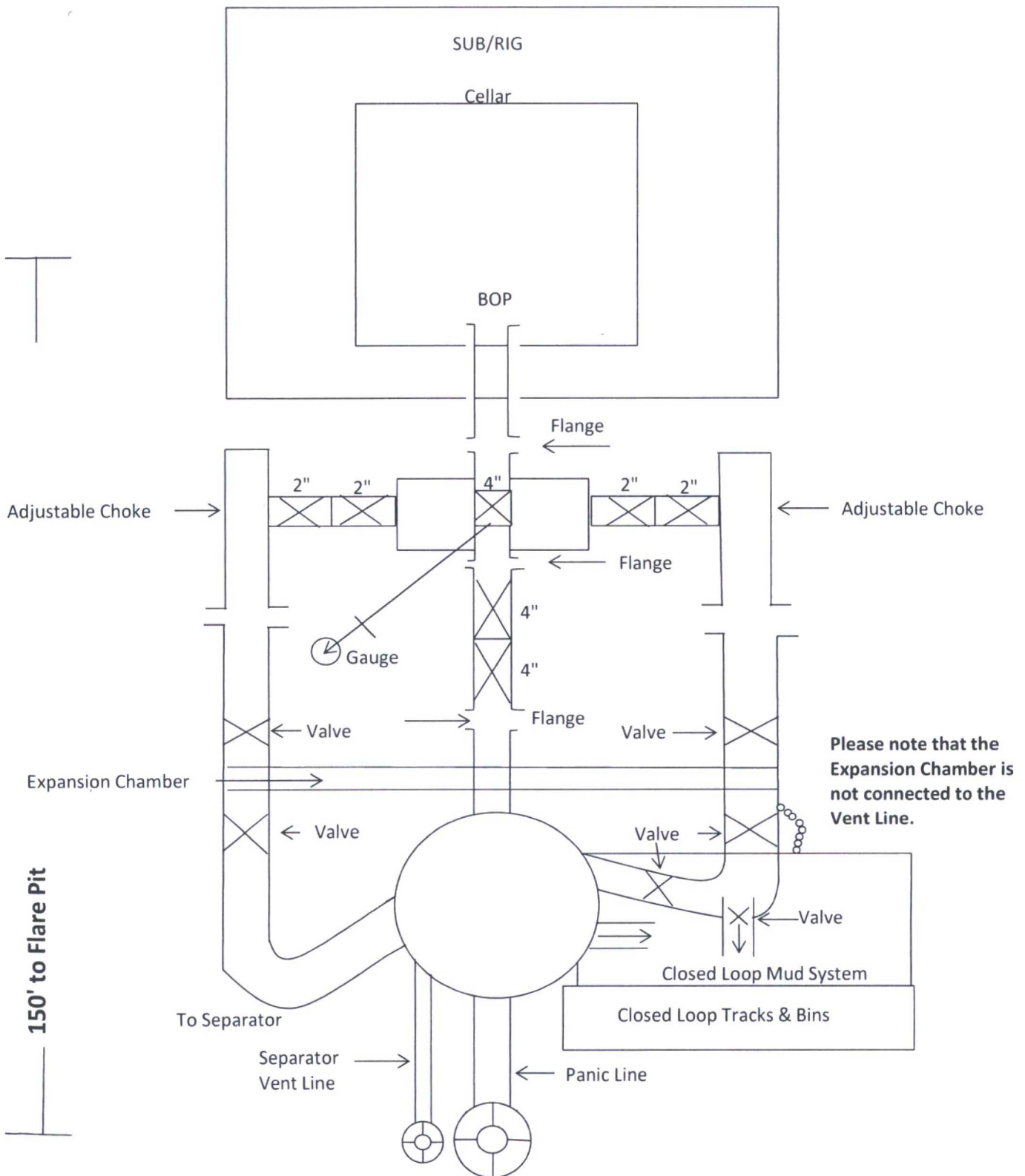
2,000 psi BOP Schematic



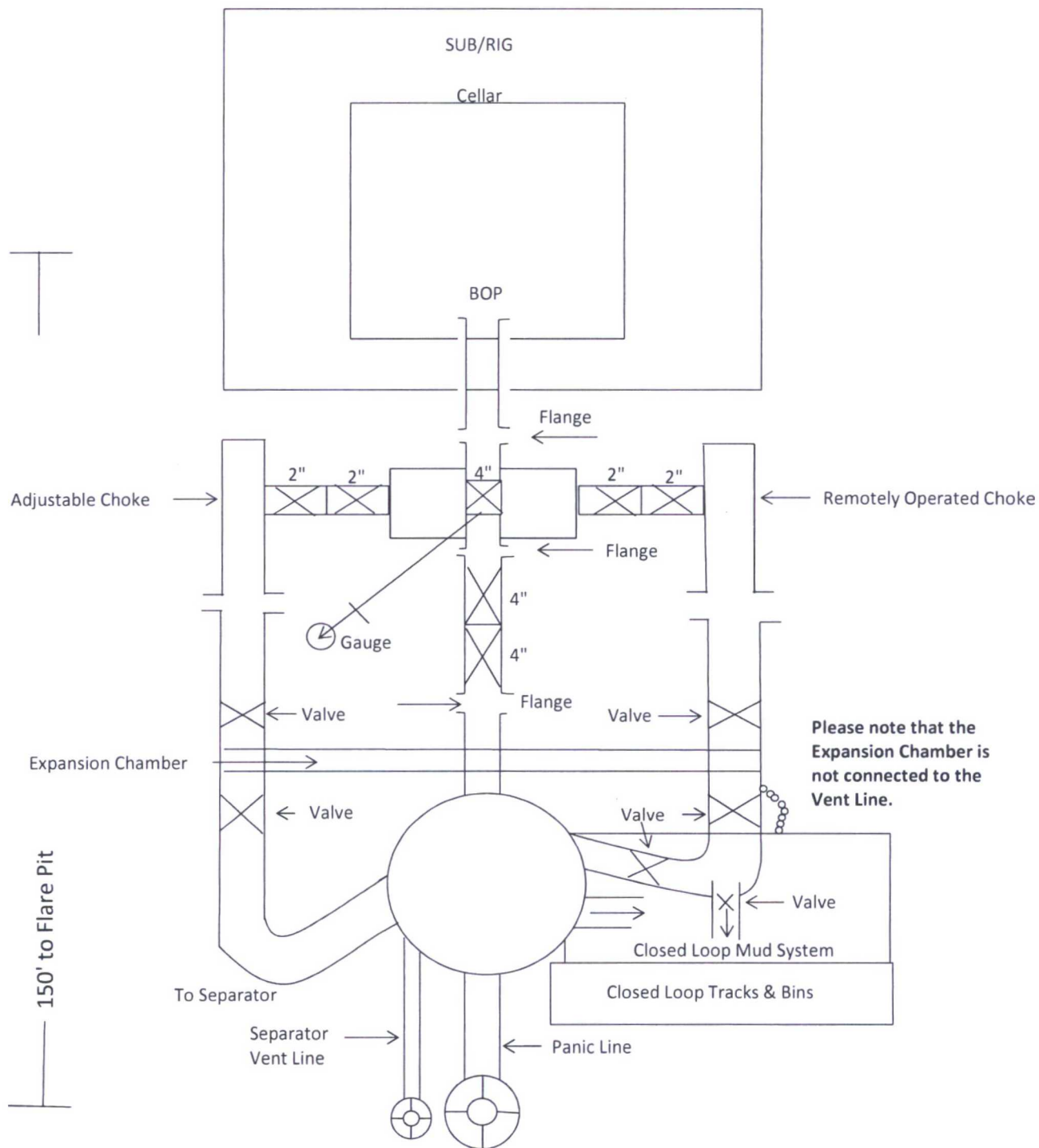
3,000 psi BOP Schematic



2M Choke Manifold Equipment



3M Choke Manifold Equipment



COG Production LLC
Rig Plat & Closed Loop Equipment Diagram

Well pad will be 340' X 340'
with cellar in center of pad

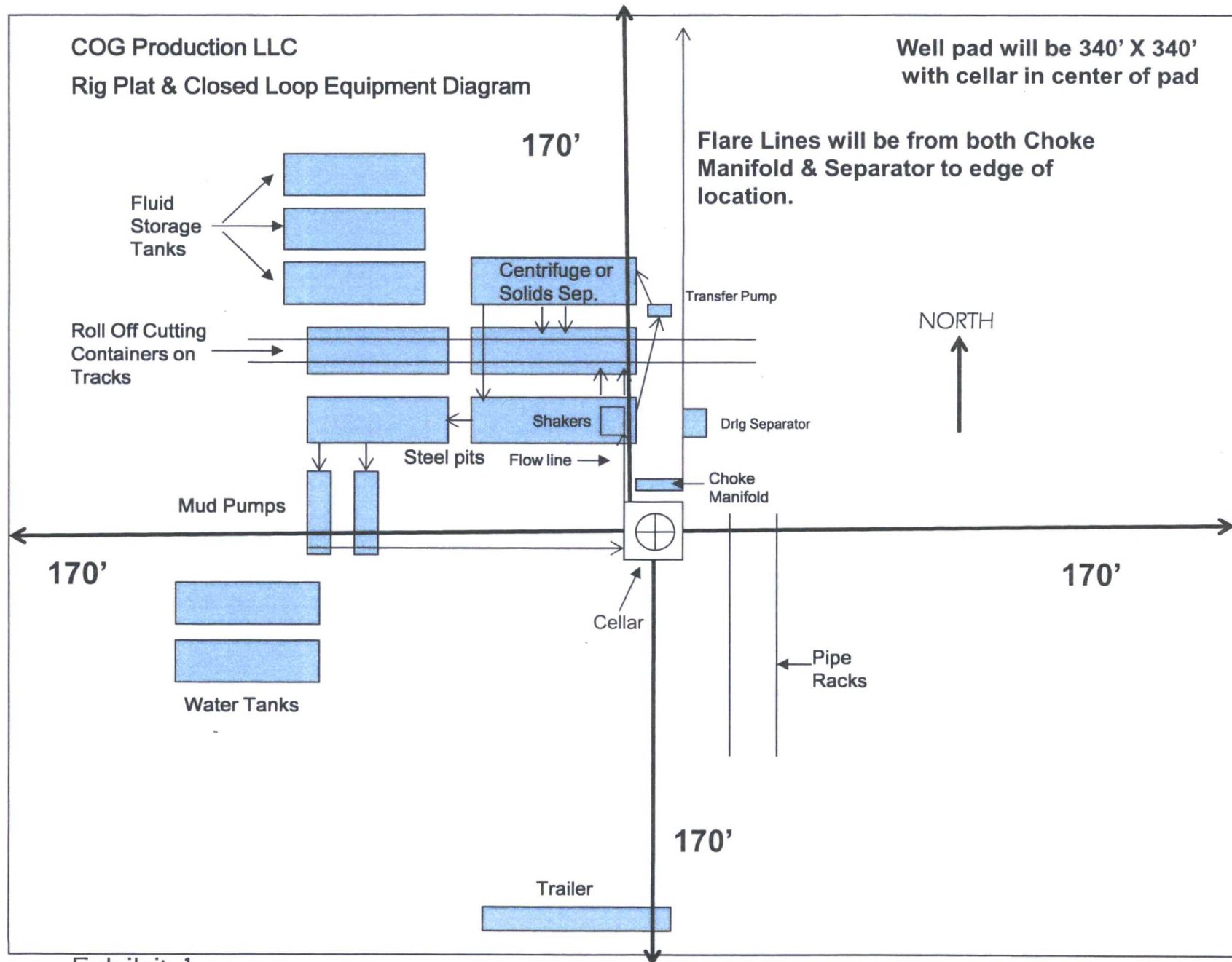


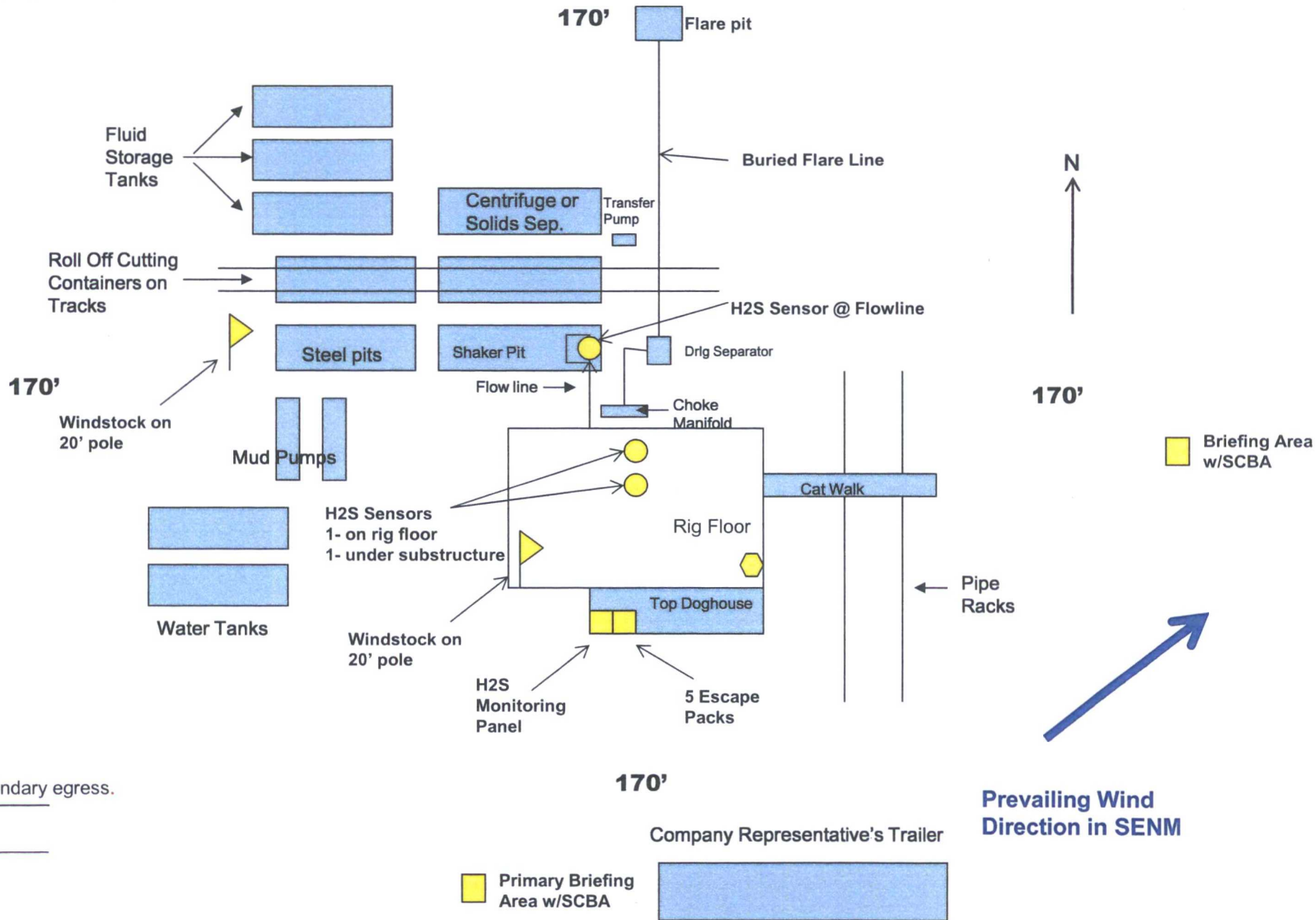
Exhibit 1

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

COG Production LLC
H₂S Equipment Schematic
Terrain: Shinnery sand hills.

Well pad will be 340' X 340'
with cellar in center of pad

Location Entry
Condition Sign



Secondary egress.



TECHNIP Umbilicals Inc.
COFLEXIP® Products Division

CERTIFICATE OF CONFORMITY

SUPPLIER

COFLEXIP® Products Division
16661 Jacintoport Blvd.
Houston, Texas 77015

CUSTOMER	OFS CANADA INC
CUSTOMER PROJECT	OFS GLOBAL RIG 772 PROJECT 59
CONTRACT NUMBER	OFS-012060-1
COFLEXIP REFERENCE NUMBER	K12386
COFLEXIP LINE DESCRIPTION	3" x 30' 10K CHOKE/KILL LINE
COFLEXIP LINE SERIAL NUMBER	K12386-202
WORKING / TEST PRESSURE (PSI)	10000 / 15000
COFLEXIP ID (inches)/PART NUMBER	3 / 076 60414 13 13
COFLEXIP STRUCTURE NUMBER	076 60414
END FITTING REFERENCE NUMBER	EM 076 65000 13 / EM 076 65000 13
END FITTING DESCRIPTION	4 1/16" 10K FLG BX 155 INC. 625 RG / 4 1/16" 10K FLG BX 155 INC. 625 RG

IRC REFERENCE**SAFE WORKING LOADS**

NOMINAL DAMAGING PULL (STRAIGHT LINE)

MINIMUM BENDING RADIUS

MAXIMUM DESIGN TEMPERATURE

-4 Deg. F To 212 Deg. F/B

We certify that the supply detailed above was manufactured and inspected in accordance with the technical specifications specified within the contract referenced above and any specifications checked below. This document serves as a Declaration and Confirmation from the Manufacturer, TECHNIP Umbilicals Inc., Houston, Texas, that asbestos materials are not utilized in any part(s) or sub-part(s) or component(s) during the assembly process of any of our Coflexip® flexible pipes.

Licence Number 16C-0001

(If Required)

TECHNIP QUALITY CONTROL

JCW Avelin 4/30/15
Name/ Date/ Stamp



TechnipTECHNIP Umbilicals Inc.
COFLEXIP® Products Division

Quality Control Department

Control Report Dated 4/28/2015

COFLEXIP FLEXIBLE PIPE TEST CERTIFICATE**Customer** OFS CANADA INC**Job Number** K12387**Address****Line Serial Number** K12387-202**Part Number** 076 60414 13 13**Application** 3" x 30' 10K CHOKE/KILL LINE

COFLEXIP certifies that the results of the test and controls performed on the above mentioned flexible pipe is as follows:

Internal Diameter	3	inches
Length	30.83	feet
Working Pressure	10000	psi
Test Pressure	15000	psi
As per attached recorder chart	24	hours
Test Duration		

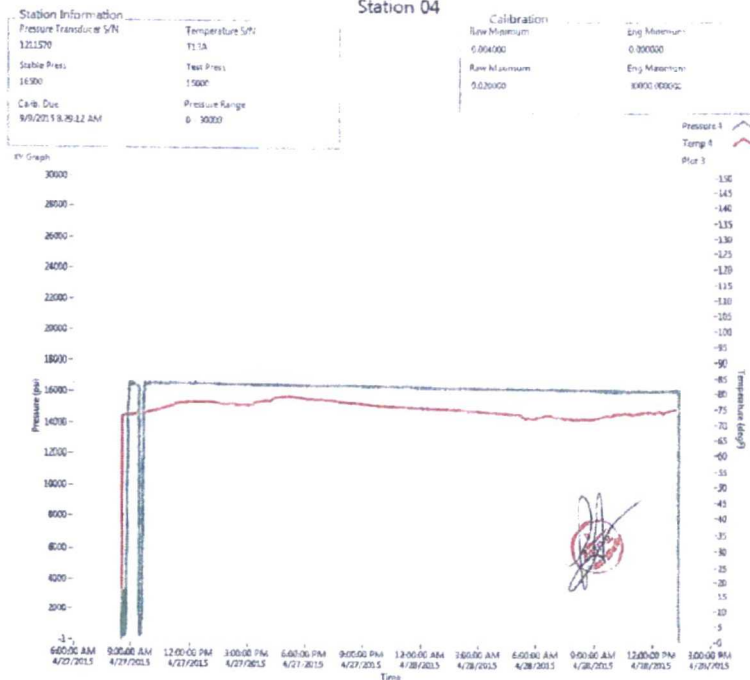
THIRD PARTY INSPECTION FIRM OR CUSTOMER REPRESENTATIVE



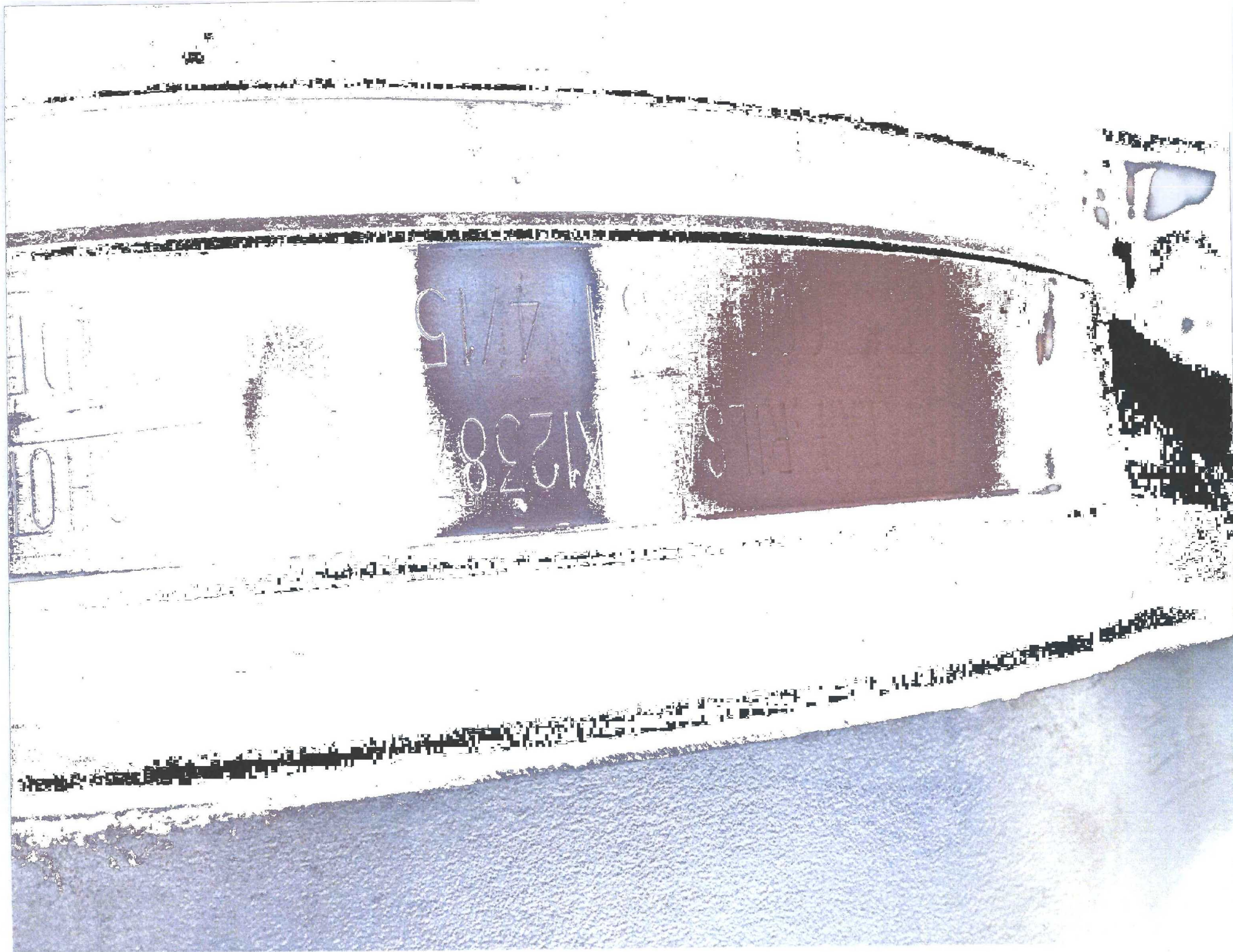
CO INC. QUALITY CONTROL

Test Configuration 12 Zone

Production Information Input	
Customer ID OFS CANADA INC	
Line S/N KL2386-202②/KL2387-202	Technician ROY
QC Information Input	
QC Insp PAT	Third Party BV
Witness? Yes	Test Procedure SIC 01 50
Special Instructions	

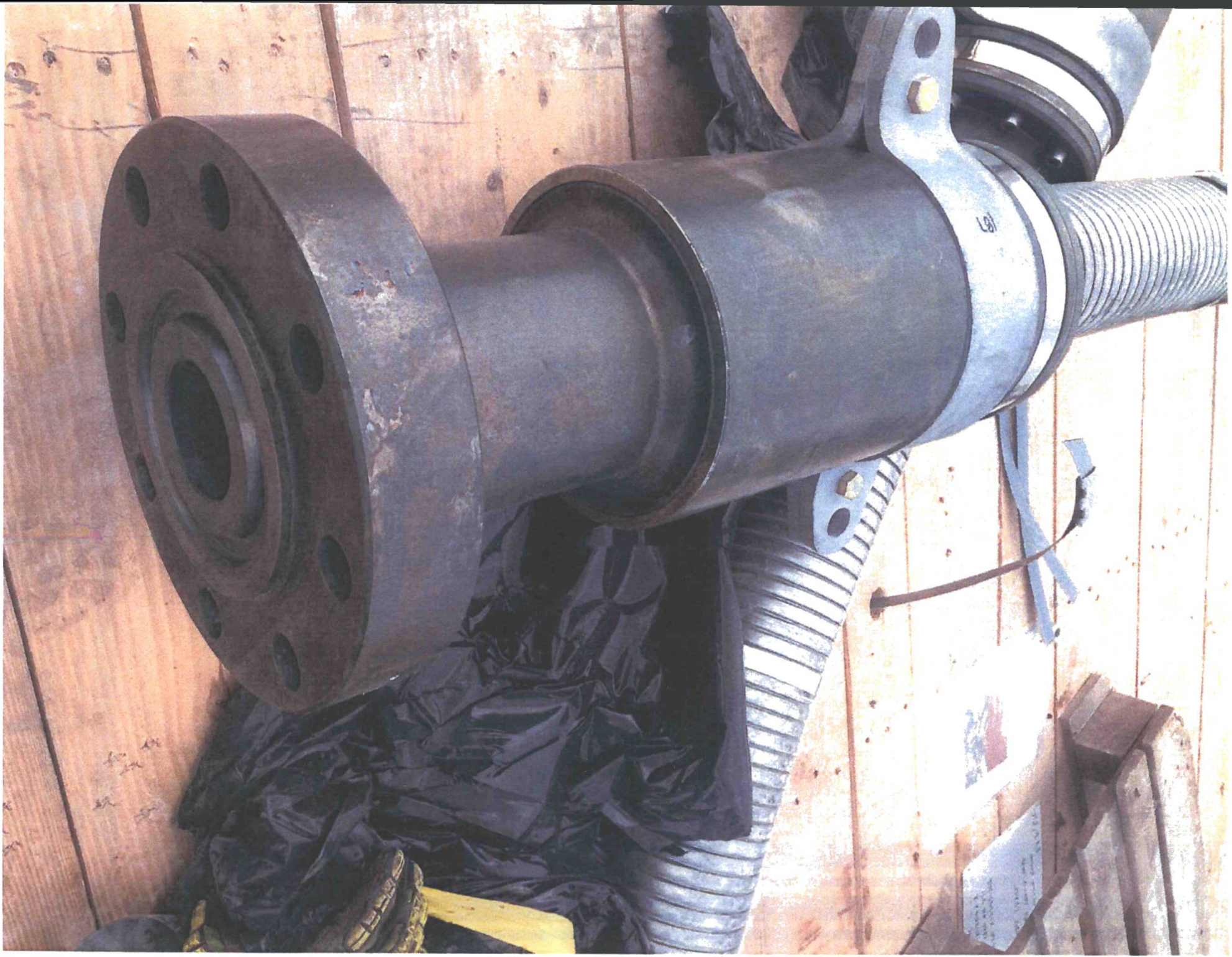












Surface Use Plan
COG Production LLC
Eider Federal #13H
SHL: 240' FNL & 2310' FEL UL B
Section 26, T24S, R32E
BHL: 330' FSL & 2100' FEL UL O
Section 35, T24S, R32E
Lea County, New Mexico

OPERATOR CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions that presently 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 COG Production LLC, 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. Executed this 6th day of July, 2015.

Signed: Melanie J. Wilson

Printed Name: Melanie J. Wilson

Position: Regulatory Coordinator

Address: 2208 W. Main Street, Artesia, NM 88210

Telephone: (575) 748-6940

Field Representative (if not above signatory): Rand French

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