15-772

OCD Hobbs

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HOBBS OCD
FEB 27 2017
RECEIVED

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM 132067 & NMNM 62223 & NMNM 86151

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. (317457)
Blue Quail 7 Federal Com #2H

2. Name of Operator BC Operating, Inc. (160825)

9. API Well No.
30-025-43644

3a. Address
P.O. Box 50820
Midland, Texas 79710

3b. Phone No. *(include area code)*
432-684-9696

10. Field and Pool, or Exploratory (53800)
Sand Dunes; Bone Spring

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
UNORTHODOX LOCATION
At surface 240' FSL & 1980' FEL of Unit Letter 'O', Section 6, T-23S, R-32E
At proposed prod. zone 240' FSL & 1980' FEL of Unit Letter 'O', Section 7, T-23S, R-32E

11. Sec., T. R. M. or Blk. and Survey or Area
Section 6, T-23S, R-32E
Section 7, T-23S, R-32E

14. Distance in miles and direction from nearest town or post office*
22.5 miles East of Loving

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)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
240'	663.92	160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
1620'	16,834' MD / 11,800' TVD	NM2572
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3533' GL	02/01/2017	45 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
Pam Stevens	Pam Stevens	04/15/2015

Title
Regulatory Analyst

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/Cody Layton		FEB 22 2017
Title	**Office**	
FIELD MANAGER	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.

APPROVAL FOR TWO YEARS

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

COPY

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

KZ 02/22/17

Approval Subject to General Requirements
& Special Stipulations Attached

BC Operating, Inc., Blue Quail 7 Federal Com #2H

1. Geologic Formations

TVD of target	11800	Pilot hole depth	13700
MD at TD:	16834	Deepest expected fresh water:	475

Basin

Formation	Depth (TVD) from KB)	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Alluvium	Surface	Water	
Rustler	870		
Castile	3165		
Base Salt	4315		
Lamar	4570		
Delaware Sands	4620	Oil/Gas	
Bone Spring Lime	8500	Oil/Gas	
First BS Sand	9500	Oil/Gas	
Second Carbonate	9750	Oil/Gas	
Second BS Sand	10100	Possible Target Zone	
Third Carbonate	10690	Oil/Gas	
Third BS Sand	11400	Possible Target Zone	
Wolfcamp	11650	Target 11800'	
Strawn	13500		
TD Pilot Hole	13700		

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program See COA

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
16"	0	~~600~~ 980	13.375"	61	J55	STC	5.56	1.3	16.26
12.25"	0	4570	9.625"	40	N80	LTC	1.3	1.43	4.03
8.75"	0	16834	5.5"	17	P110 HC	SEMI BUTT	1.13	1.61	2.83
						BLM Minimum Safety Factor	1.125	1	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

Must have table for contingency casing

	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.	Y
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.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd 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 2nd 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?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	230	13.5	1.757	9.1	10	Lead: ExtendaCem + 2 lbm Kol-Seal + 0.125 lbm Poly-E-Flake
	200	14.8	1.345	6.2	8	Tail: HalCem + 2 lbm Kol-Seal + 0.125 lbm Poly-E-Flake + 1% Calcium Chloride - flake
Inter.	1250	12.6	1.934	10.36	15	Lead: EconoCem + 0.25 lbm Poly-E-Flake + 0.60% Halad®-9 + 3 lbm Kol-Seal
	390	14.8	1.339	6.13	11	Tail: HalCem + 3 lbm Kol-Seal + 0.25 lbm Poly-E-Flake
Prod.	1280	11.9	2.303	13.19	24	Lead: VersaCem + 10% Bentonite + 2 lbm Kol-Seal + 0.25 lbm D-Air 5000 + 0.50% HR-601
	1000	15	2.625	11.4	10	Tail: SoluCem + 0.25 lbm D-Air 5000 + 0.80% HR-601 (Acid Soluble Cement)

See COA

DV tool depth(s), if used, will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	100%
Production	0'	30%

Include Pilot Hole Cementing specs: (Optional pilot hole on subsequent wells in same section)
Pilot hole depth 13700
KOP 11227

Plug top	Plug Bottom	% Excess	No. Sacks	Wt. lb/gal	Yld ft3/sack	Water gal/sk	Slurry Description and Cement Type
11200	11700	13	200	15.6	1.18	5	Class H + 0.3% R-20
13450	13700	13	100	15.6	1.18	5	Class H + 0.3% R-20

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
See COA 16"	20"	2M	Annular	x	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
12-1/4"	13-5/8"	2M	Annular	x	50% testing pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other *		
See COA 8-3/4"	11"	5M ~~3M~~	Annular	X	50% testing pressure
			Blind Ram	X	5M ~~3M~~
			Pipe Ram	X	
			Double Ram		
			Other *		

*Specify if additional ram is utilized.

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.

X	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.
X	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.
N	Are anchors required by manufacturer?
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. • Provide description here See attached schematic.

See COA

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. shoe	FW Gel	8.5-9.2	28-34	N/C
Surf csg	Int shoe	Brine	9.6-10	28-34	N/C
Int shoe	TD	Cut Brine/EVO	8.4-8.9	28-34	<15

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.	
X	Will run GR/CNL fromTD 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	Resistivity	Int. shoe to KOP
X	Density	Int. shoe to KOP
X	CBL	Production casing
X	Mud log	Intermediate shoe to TD
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	3900 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

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.	
	H2S is present
X	H2S Plan attached

See COA

8. Other facets of operation

Is this a walking operation? N If yes, describe.
Will be pre-setting casing? N If yes, describe.

Attachments
_X_ Directional Plan
_X_ Other, describe

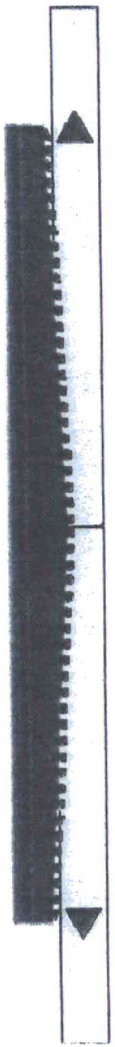
- Improved 5.5" casing thread design example
- 20" annular
- 13-5/8" annular
- 11" BOPE
- Flexible hose specs and test chart

GB tubulars
Casings & Connections

GB Connection Performance Properties Sheet

Rev. 1 (02/05/2014)

ENGINEERING THE RIGHT CONNECTIONS™



Casing:	5.5 OD, 17 ppf	Connection:	GB CD Butt 6.050
Grade:	P-110	Grade:	API P-110

PIPE BODY GEOMETRY

Nominal OD (in.)	5 1/2	Wall Thickness (in.)	0.304	Drift Diameter (in.)	4.767
Nominal Weight (ppf)	17.00	Nominal ID (in.)	4.892	API Alternate Drift Dia. (in.)	N/A
Plain End Weight (ppf)	16.89	Plain End Area (in.^{2})	4.962		

PIPE BODY PERFORMANCE

Material Specification	P-110	Min. Yield Str. (psi)	110,000	Min. Ultimate Str. (psi)	125,000
Collapse		**Tension**		**Pressure**	
API (psi)	7,480	Pl. End Yield Str. (kips)	546	Min. Int. Yield Press. (psi)	10,640
High Collapse (psi)	8,580	**Torque**		**Bending**	
		Yield Torque (ft-lbs)	64,680	Build Rate to Yield (°/100 ft)	91.7

GB CD Butt 6.050 COUPLING GEOMETRY

Coupling OD (in.)	6.050	Makeup Loss (in.)	4.2500
Coupling Length (in.)	8.500	Critical Cross-Sect. (in.^{2})	6.102

GB CD Butt 6.050 CONNECTION PERFORMANCE RATINGS/EFFICIENCIES

Material Specification	API P-110	Min. Yield Str. (psi)	110,000	Min. Ultimate Str. (psi)	125,000
Tension		**Efficiency**		**Bending**	
Thread Str. (kips)	568	Internal Pressure (%)	100%	Build Rate to Yield (°/100 ft)	83.3
Min. Tension Yield (kips)	638	External Pressure (%)	100%	**Yield Torque**	
Min. Tension Ult. (kips)	725	Tension (%)	100%	Yield Torque (ft-lbs)	17,030
Joint Str. (kips)	568	Compression (%)	100%		
		Ratio of Areas (Cplg/Pipe)	1.23		

MAKEUP TORQUE

Min. MU Tq. (ft-lbs)	6,470	Max. MU Tq. (ft-lbs)	12,940	Running Tq. (ft-lbs)	See GBT RP
				Max. Operating Tq. (ft-lbs)*	16,180

Units: US Customary (lbm, in., °F, lbf)

1 kip = 1,000 lbs

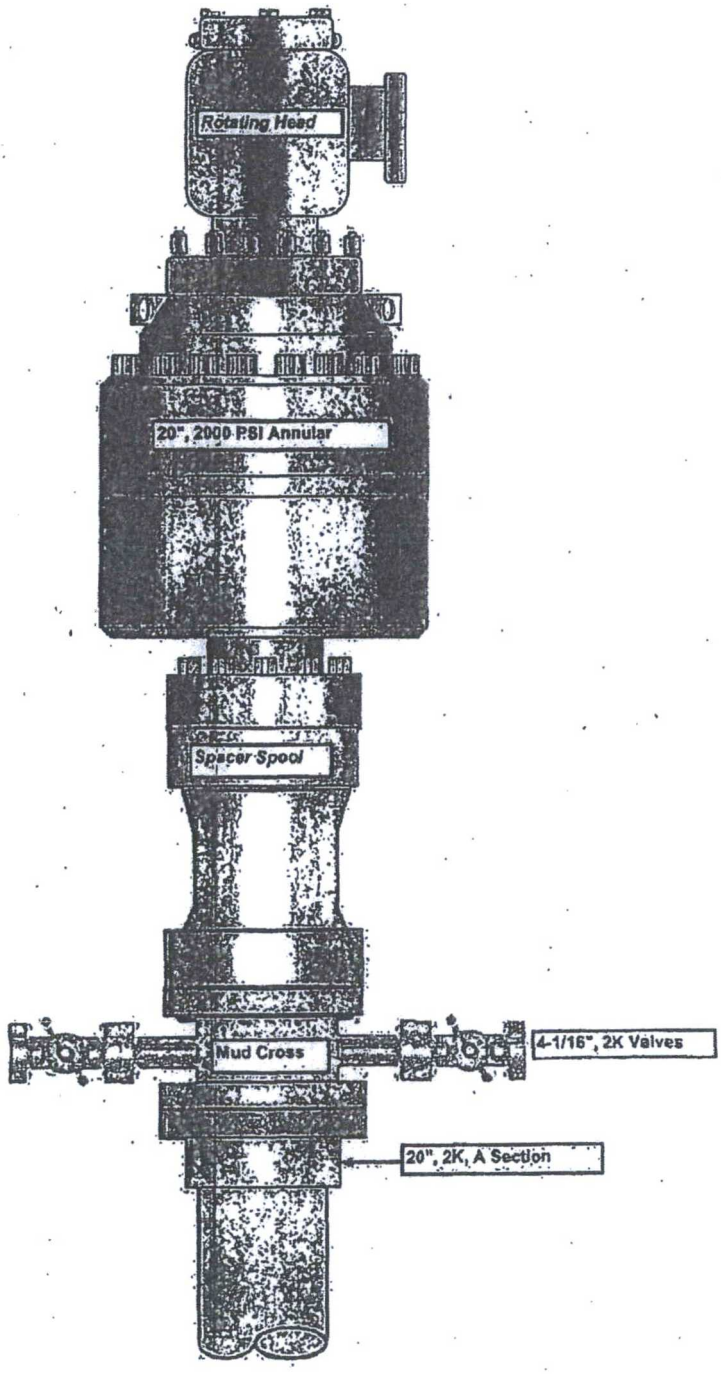
* See Running Procedure for description and limitations.

See attached: Notes for GB Connection Performance Properties.

GBT Running Procedure (GBT RP): www.gbtubulars.com/pdf/RP_GB_DWC_Connections.pdf

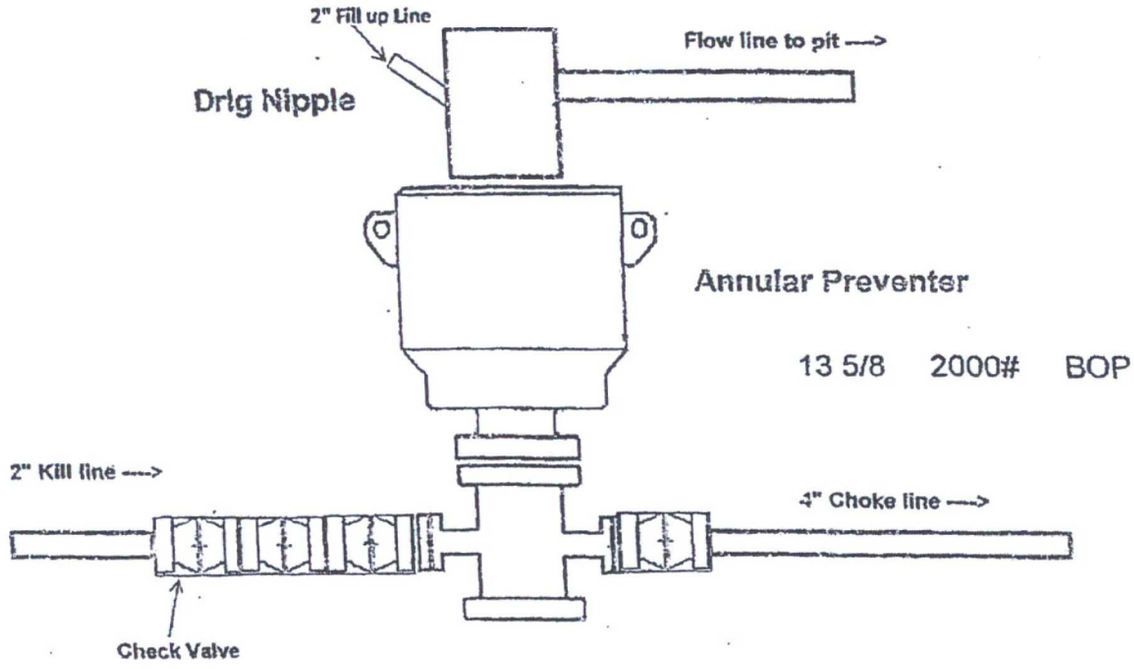
Blanking Dimensions: www.gbtubulars.com/pdf/GB_DWC_Blanking_Dimensions.pdf

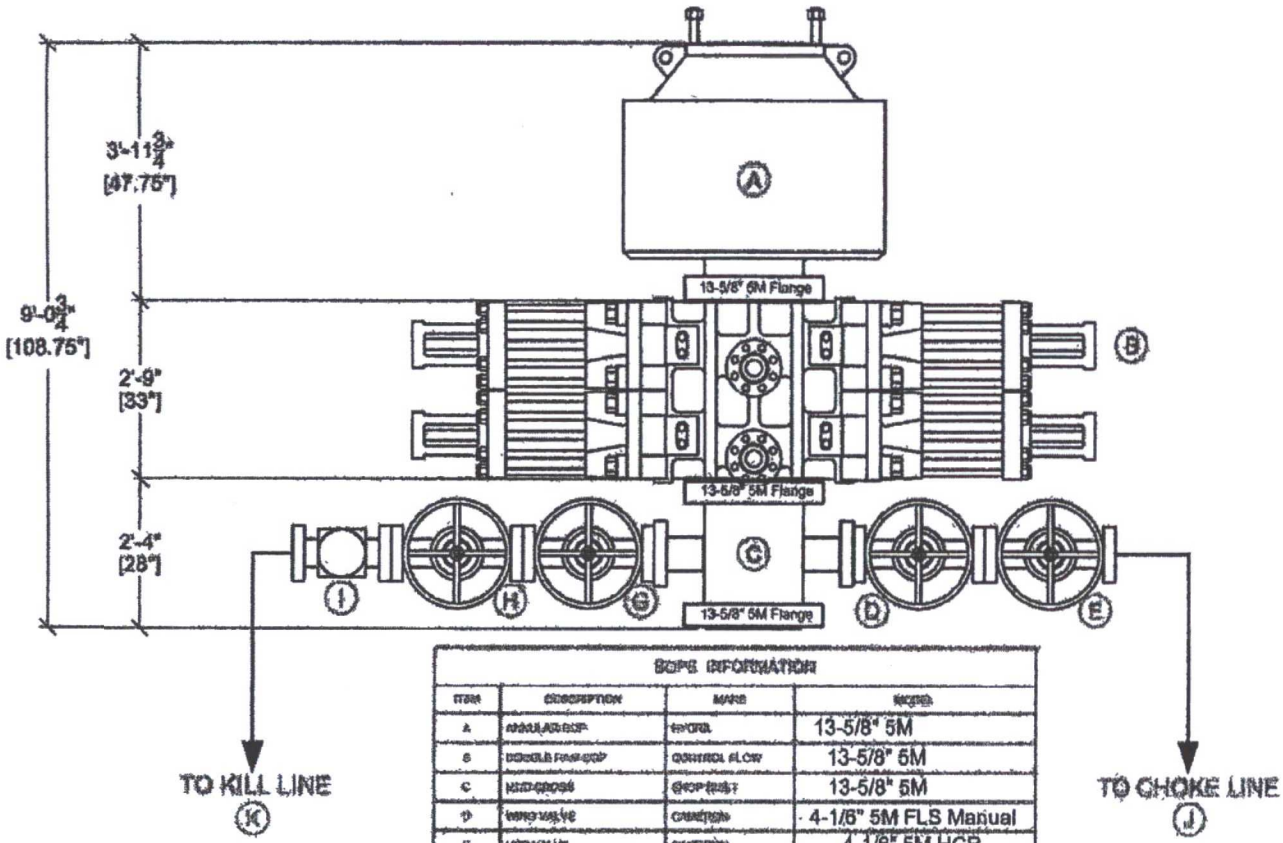
20" 2K Annular



BC Operating, Inc.
Exhibit 1

2,000 psi BOP Schematic

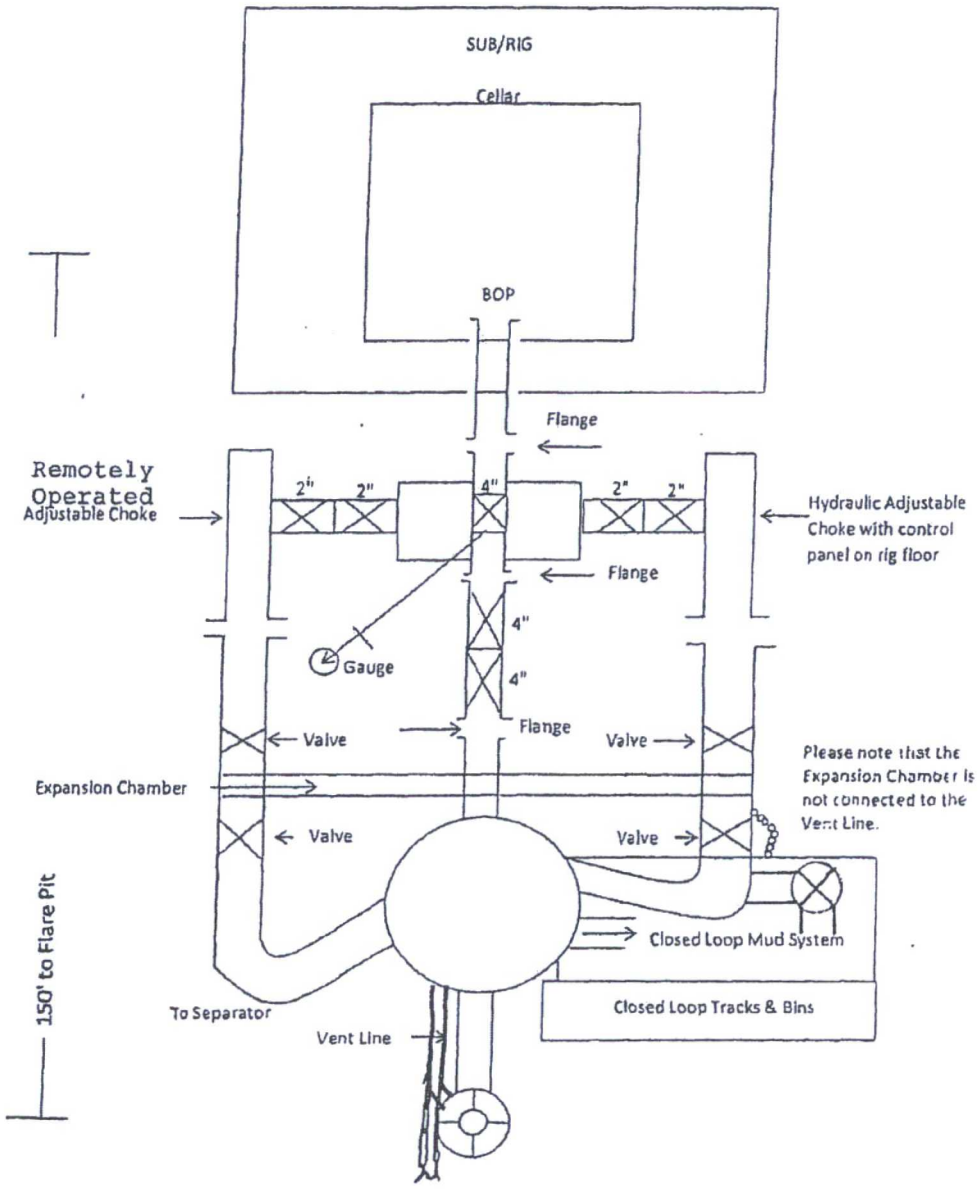




BOPE INFORMATION			
ITEM	DESCRIPTION	MAKE	NOTES
A	ANNULAR BOP	HYDRIL	13-5/8" 5M
B	DOUBLE RAM BOP	CAMERON	13-5/8" 5M
C	MID-BODY	CAMERON	13-5/8" 5M
D	HCR VALVE	CAMERON	4-1/6" 5M FLS Manual
E	HCR VALVE	CAMERON	4-1/6" 5M HCR
F			
G	KILL VALVE	CAMERON	2-1/6" 5M FLS Manual
H	KILL VALVE	CAMERON	2-1/6" 5M FLS Manual
I	CHECK VALVE	CAMERON	2-1/6" 5M "R" Check
J	CHOKE LINE		4-1/16" Hardline
K	KILL LINE		2-1/16" Hardline
L			

BC Operating, Inc.
Exhibit 4

5M
~~3M~~ Choke Manifold Equipment



BC Operating, Inc. Closed Loop System

Design Plan

Equipment List

- 2 – 414 MI Swaco *Centrifuges*
- 2 – MI Swaco 4 screen Moongoose *Shale Shakers*
- 2 – double screen *Shakers* with rig inventory
- 2 – CRI *Haul off bins* with track system
- 2 – additional 500bbl *Frac tanks* for fresh and brine water
- 2 – 500bbl *water tanks* with rig inventory

**Equipment manufactures may vary due to availability but components will not.*

Operation and Maintenance

The system along with equipment will be inspected numerous times a day by each tour to make sure all equipment is operating correctly. Routine maintenance will be done to keep system running properly. Any leak in system will be repaired and/or contained immediately and the OCD notified within 48 hours of the remediation process start.

Closure Plan

While drilling, all cuttings and fluids associated with drilling will be hauled off and disposed of via Controlled Recovery Incorporated Facilities Permit NM01-0006.

Nabors Asset # 66-0638

Continental CONTITECH

Fluid Technology

Quality Document

QUALITY CONTROL	No.: QC-DB- 89 / 2011
	Page : 1 / 54
Hose No.: 60313, 60314, 60315, 60316	Revision : 0
	Date: 07. March 2011.
	Prepared by :
	Appr. by:

CHOKE AND KILL HOSES

id.: 3" 68,9 MPa x (25 ft) 7,62 m 1 pc
x (45 ft) 13,72 m 3 pcs

DATA BOOK

Purchaser:

Purchaser Order No.:

ContiTech Rubber Order No.: 493934

ContiTech Beattie Co. Order No.: 004795

ASSET 66-0638, 66-0639, 66-0640, 66-0641

ContiTech Rubber Industrial Kft.
Budapesti út 10., Szeged H 6728
P.O.Box 152 Szeged H-6701
Hungary

Phone: +36 62 566 737
Fax: +36 62 566 736
e-mail: info@fluid.conitech.hu
Internet: www.conitech-rubber.hu

The Court of Csongrád County as Registry Court
Registry Court No: HU 06-09-002502
EU VAT No: HU11007209

Bank data
Commerzbank Zrt.
Budapest
14220108-26830003-00000000

Continental CONTITECH

Fluid Technology

Quality Document

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE

CERT. N°: 246

PURCHASER:	ContiTech Beattie Co.			P.O. N°:	004795		
CONTITECH ORDER N°:	493934	HOSE TYPE:	3" ID	Choke and Kill Hose			
HOSE SERIAL N°:	60313	NOMINAL / ACTUAL LENGTH:	7,62 m / 7,63 m				
W.P. 68,9 MPa	10000 psi	T.P. 103,4 MPa	15000 psi	Duration:	60 min.		

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 20 MPa

COUPLINGS Type	Serial N°	Quality	Heat N°
3" coupling with	324 320	AISI 4130	H0434
4 1/16" Swivel Flange end		AISI 4130	31742
Hub		AISI 4130	B2297A

ASSET NO.: 66-0638

API Spec 16 C
Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.

COUNTRY OF ORIGIN HUNGARY/EU

Date:	Inspector	Quality Control
01. March 2011.		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

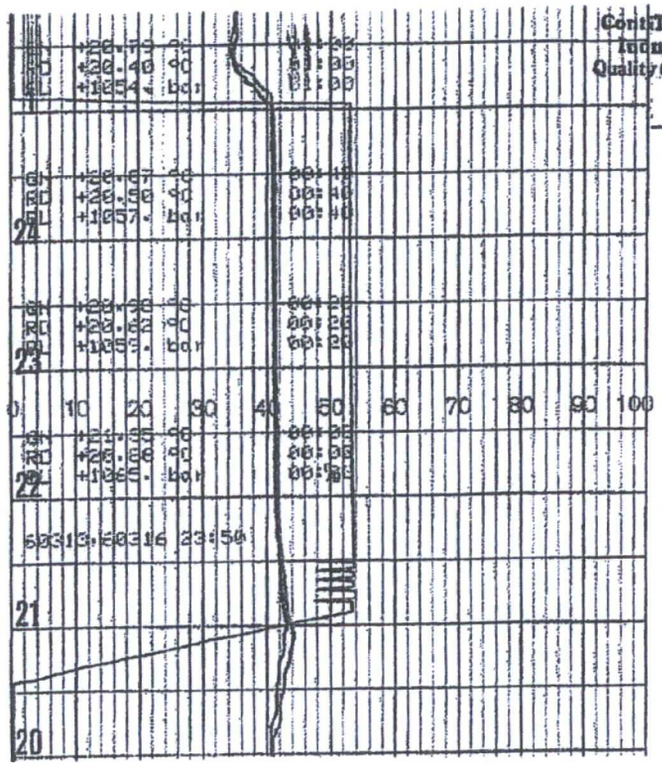
ContiTech Rubber Industrial Kft.
Budaposti út 10., Szeged H 6728
P.O.Box 152 Szeged H-6701
Hungary

Phone: +36 62 566 737
Fax: +36 62 566 738
e-mail: info@fluid.contitech.hu
Internet: www.contitech-rubber.hu

The Court of Csongrád County as Registry Court
Registry Court No: HU 06-09-002502
EU VAT No: HU11067209

Bank data
Commerzbank Zrt.
Budapest
14220108-26830003-00000000

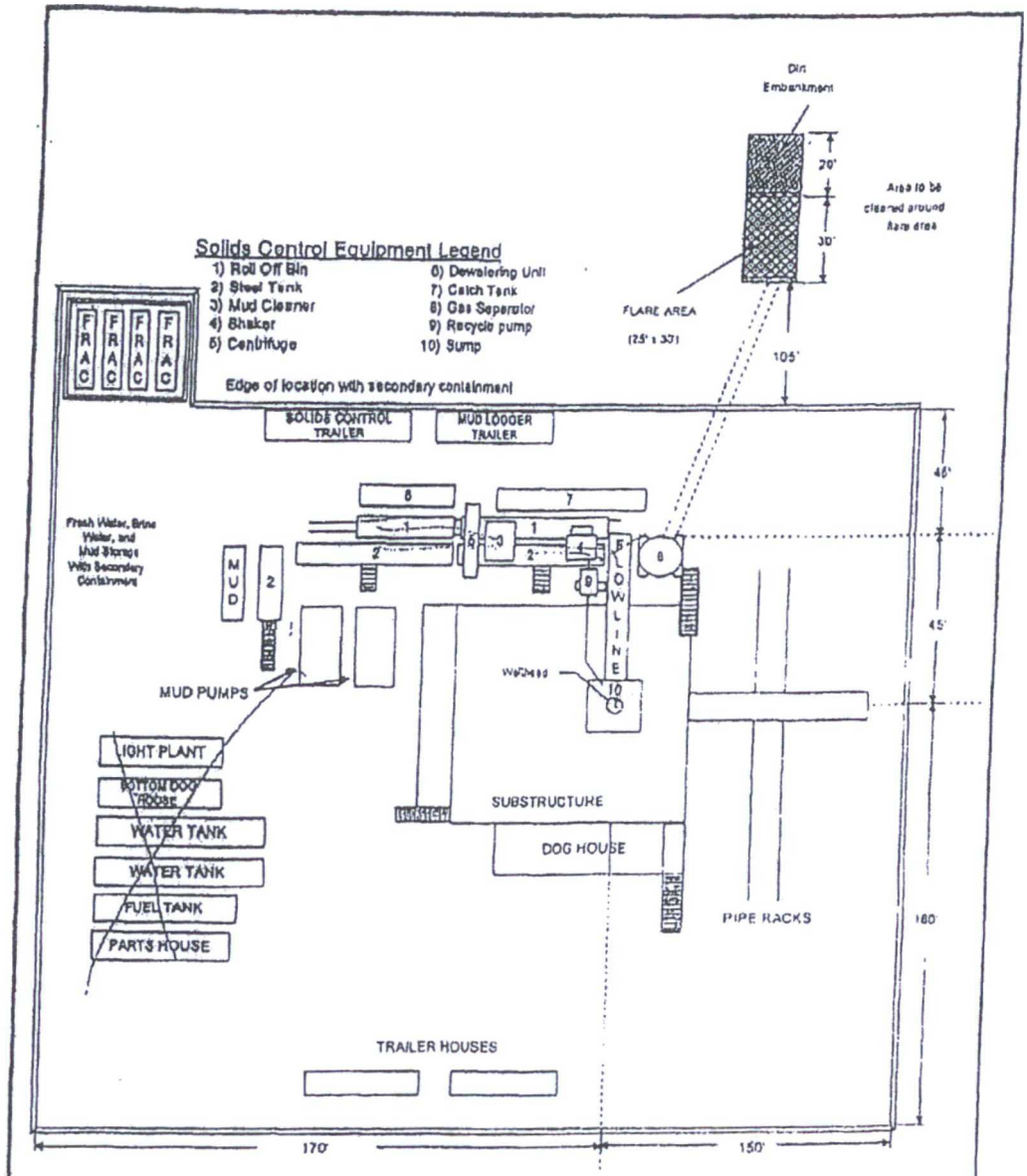
ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE *No: 246, 249*



Continental CONTITECH

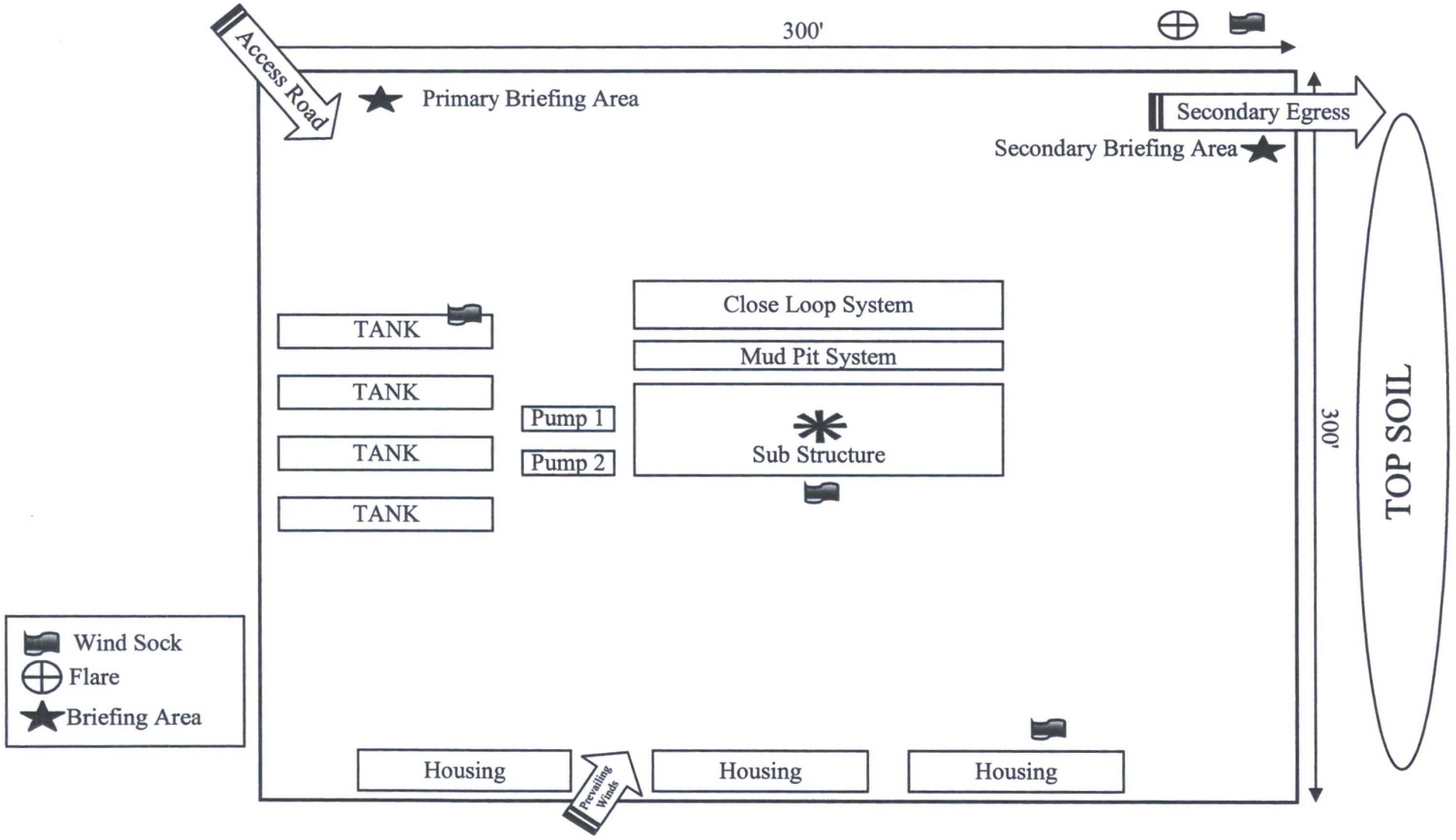
Hose Data Sheet

CRI Order No.	493934
Customer	ContiTech Beattie Co.
Customer Order No	PO4795, PBC10685
Item No.	3
Hose Type	Flexible Hose
Standard	**API SPEC 16 C**
Inside dia in inches	3
Length	25 ft
Type of coupling one end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGEC/W BX155 ST/ST INLAID RING GR
Type of coupling other end	FLANGE 4.1/16" 10KPSI API SPEC 17D SV SWIVEL FLANGE C/W BX155 ST/ST INLAID RING GR
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St.steel outer wrap
Internal stripwound tube	No
Lining	OIL RESISTANT
Safety clamp	Yes
Lifting collar	Yes
Element C	Yes
Safety chain	No
Safety wire rope	Yes
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
MBR operating [m]	1,60
MBR storage [m]	1,40
Type of packing	WOODEN CRATE ISPM-15



TYPICAL
RIG LAYOUT SCHEMATIC
INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

BC Operating, Inc.
Blue Quail 7 Federal Com #2H
SHL: 240' FSL & 1980' FEL, Unit Letter 'O'
Section 6, T-23S, R-32E
Lea County, New Mexico



BC Operating, Inc.

Statement of Certification

Blue Quail 7 Federal Com #2H

SHL: 240' FSL & 1980' FEL of Unit Letter 'O', Section 6, T-23S, R-32E

BHL: 240' FSL & 1980' FEL of Unit Letter 'O', Section 7, T-23S, R-32E

Lea County, New Mexico

This Statement of Certification is submitted with Form 3160-3, Application for Permit to Drill in accordance with BLM Onshore Oil and Gas Order Number 1 Section III.D.6., covering the above described well.

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.

Executed this 15st day of April, 2015.

Pam Stevens

Name: Pam Stevens
Position Title: Regulatory Analyst, BC Operating, Inc.
Address: P.O. Box 50820 – Midland, Texas 79710
Telephone: 432-684-9696