Carlsbad Field Office
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Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NMNM114988
	6. If Indian, Allotee or Tribe Name
	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. SEAWOLF 1-12 FED 86H (317671)
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY LP (6137)	9. API Well No. 30-025-43767
3a. Address 333 West Sheridan Avenue Oklahoma City OK 3b. Phone No. (include area code) (405)552-6571	10. Field and Pool, or Exploratory WC-025 G-09 S253336D / UPPER WOL (98094)
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface NENE / 200 FNL / 750 FEL / LAT 32.0791851 / LONG -103.5199528 At proposed prod. zone SESE / 330 FSL / 380 FEL / LAT 32.0516004 / LONG -103.5187612	11. Sec., T. R. M. or Blk. and Survey or Area SEC 1 / T26S / R33E / NMP
14. Distance in miles and direction from nearest town or post office*	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 1280 / 17. Spacing Unit dedicated to this well 320
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 380 feet	19. Proposed Depth 12679 feet / 22554 feet / 20. BLM/BIA Bond No. on file FED: CO1104
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3325 feet	22. Approximate date work will start* 10/25/2017 / 23. Estimated duration 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 (Electronic Submission)	Name (Printed/Typed) Rebecca Deal / Ph: (405)228-8429	Date 10/14/2016
Title Regulatory Compliance Professional		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 04/17/2017
Title Supervisor Multiple Resources	Office HOBBS	

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)

APPROVED WITH CONDITIONS

KZ 04/26/17

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

See COA

String Type: SURFACE **Other String Type:**

Hole Size: 17.5

Top setting depth MD: 0 **Top setting depth TVD:** 0

Top setting depth MSL: -9354

Bottom setting depth MD: 1000 **Bottom setting depth TVD:** 1000

Bottom setting depth MSL: -10354

Calculated casing length MD: 1000

Casing Size: 13.375 **Other Size**

Grade: ~~H-40~~ J-55 **Other Grade:**

Weight: 48~~-~~ 54.5

Joint Type: ~~STC~~ BTC **Other Joint Type:**

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

Safety Factors

Collapse Design Safety Factor: 1.59 **Burst Design Safety Factor:** 3.46

Joint Tensile Design Safety Factor type: BUOYANT **Joint Tensile Design Safety Factor:** 2.11

Body Tensile Design Safety Factor type: BUOYANT **Body Tensile Design Safety Factor:** 2.11

Casing Design Assumptions and Worksheet(s):

Seawolf 1-12 Fed 86H_Surf Csg Ass_10-14-2016.docx

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

see COA

String Type: INTERMEDIATE **Other String Type:**

Hole Size: 12.25

Top setting depth MD: 0 **Top setting depth TVD:** 0

Top setting depth MSL: -9354

Bottom setting depth MD: 11400 **Bottom setting depth TVD:** 11400

Bottom setting depth MSL: -20754

Calculated casing length MD: 11400

Casing Size: 9.625 **Other Size**

Grade: P-110 EC **Other Grade:**

Weight: 40

Joint Type: OTHER **Other Joint Type:** BTC

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

Safety Factors

Collapse Design Safety Factor: 1.25 **Burst Design Safety Factor:** 1.59

Joint Tensile Design Safety Factor type: BUOYANT **Joint Tensile Design Safety Factor:** 2.58

Body Tensile Design Safety Factor type: BUOYANT **Body Tensile Design Safety Factor:** 2.58

Casing Design Assumptions and Worksheet(s):

Seawolf 1-12 Fed 86H_Int Csg Ass_10-14-2016.docx

OCTG Casing

O.D.	T&C LB FT	PE LB FT	GRADE
[illegible]	10.00	33.97	P110 EC

Grade - Material Properties

Minimum Yield Strength	125.0	ksi
Maximum Yield Strength	140	ksi
Minimum Tensile Strength	135	ksi

Pipe Body Data (PE)

Geometry

Nominal ID	8.835	inch
Wall	0.395	inch
Nominal Area	11.454	inch²
API Drift	8.679	inch
Alternate Drift	8.750	inch

Performance

Pipe Body Yield Strength	1,432	kips
Collapse Resistance	4,230	psi
Internal Yield Pressure (API Historical)	8,980	psi

Lame - Internal Yield Pressure

Lamé open	8,950	psi
Lamé capped	9,970	psi
Lamé ductile rupture	9,700	psi

API Connection Data

STC Internal Pressure	8,980	psi
STC Joint Strength	861	kips
LC Internal Pressure	8,980	psi
LC Joint Strength	988	kips
BC Internal Pressure	8,980	psi
BC Joint Strength	1,266	kips

LC Torque (ft-lbs)

minimum	7,410	optimum	9,880	maximum	12,350

[illegible]

AFMSS

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

Operator Certification Data Report

04/19/2017

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: Rebecca Deal **Signed on:** 10/14/2016

Title: Regulatory Compliance Professional

Street Address: 333 West Sheridan Avenue

City: Oklahoma City **State:** OK **Zip:** 73102

Phone: (405)228-8429

Email address: Rebecca.Deal@dvn.com

Field Representative

Representative Name: RICHARD WEDMAN

Street Address: 6488 SEVEN RIVERS HWY

City: ARTESIA **State:** NM **Zip:** 88210

Phone: (575)748-1819

Email address: RICHARD.WEDMAN@DVN.COM

AFMSS

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

Application Data Report
04/19/2017

APD ID: 10400005998 **Submission Date:** 10/14/2016

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

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

Section 1 - General

APD ID: 10400005998 **Tie to previous NOS?** **Submission Date:** 10/14/2016

BLM Office: HOBBS **User:** Rebecca Deal **Title:** Regulatory Compliance Professional

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM114988 **Lease Acres:** 1280

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO **APD Operator:** DEVON ENERGY PRODUCTION COMPANY LP

Operator letter of designation:

Keep application confidential? YES

Operator Info

Operator Organization Name: DEVON ENERGY PRODUCTION COMPANY LP

Operator Address: 333 West Sheridan Avenue **Zip:** 73102

Operator PO Box:

Operator City: Oklahoma City **State:** OK

Operator Phone: (405)552-6571

Operator Internet Address: aletha.dewbre@dvn.com

Section 2 - Well Information

Well in Master Development Plan? NO **Mater Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** WC-025 G-09 S253336D **Pool Name:** UPPER WOLFCAMP

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Describe other minerals:

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** YES **New surface disturbance?** Y

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** SEAWOLF 1-12 FED **Number:** 85H, 86H, 94H, 95H

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

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: **Distance to nearest well:** 380 FT **Distance to lease line:** 200 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: SEAWOLF 1-12 FED 86H_C-102 Signed_10-14-2016.pdf

Well work start Date: 10/25/2017 **Duration:** 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 4804A

	STATE: NEW MEXICO	**Meridian:** NEW MEXICO PRINCIPAL	**County:** LEA
	Latitude: 32.0791851	**Longitude:** -103.5199528	
SHL	**Elevation:** 3325	**MD:** 0	**TVD:** 0
Leg #: 1	**Lease Type:** FEDERAL	**Lease #:** NMNM114988	
	NS-Foot: 200	**NS Indicator:** FNL	
	EW-Foot: 750	**EW Indicator:** FEL	
	Twsp: 26S	**Range:** 33E	**Section:** 1
	Aliquot: NENE	**Lot:**	**Tract:**

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

	STATE: NEW MEXICO	**Meridian:** NEW MEXICO PRINCIPAL	**County:** LEA
	Latitude: 32.0791851	**Longitude:** -103.5199528	
KOP	**Elevation:** -8906	**MD:** 12249	**TVD:** 12231
Leg #: 1	**Lease Type:** FEDERAL	**Lease #:** NMNM114988	
	NS-Foot: 200	**NS Indicator:** FNL	
	EW-Foot: 380	**EW Indicator:** FEL	
	Twsp: 26S	**Range:** 33E	**Section:** 1
	Aliquot: NENE	**Lot:**	**Tract:**

	STATE: NEW MEXICO	**Meridian:** NEW MEXICO PRINCIPAL	**County:** LEA
	Latitude: 32.0791851	**Longitude:** -103.5199528	
PPP	**Elevation:** -9384	**MD:** 13001	**TVD:** 12709
Leg #: 1	**Lease Type:** FEDERAL	**Lease #:** NMNM114988	
	NS-Foot: 635	**NS Indicator:** FNL	
	EW-Foot: 380	**EW Indicator:** FEL	
	Twsp: 26S	**Range:** 33E	**Section:** 1
	Aliquot: NENE	**Lot:**	**Tract:**

	STATE: NEW MEXICO	**Meridian:** NEW MEXICO PRINCIPAL	**County:** LEA
	Latitude: 32.0516004	**Longitude:** -103.5187612	
EXIT	**Elevation:** -9354	**MD:** 22554	**TVD:** 12679
Leg #: 1	**Lease Type:** FEDERAL	**Lease #:** NMNM114988	
	NS-Foot: 330	**NS Indicator:** FSL	
	EW-Foot: 380	**EW Indicator:** FEL	
	Twsp: 26S	**Range:** 33E	**Section:** 12
	Aliquot: SESE	**Lot:**	**Tract:**

	STATE: NEW MEXICO	**Meridian:** NEW MEXICO PRINCIPAL	**County:** LEA
	Latitude: 32.0516004	**Longitude:** -103.5187612	
BHL	**Elevation:** -9354	**MD:** 22554	**TVD:** 12679
Leg #: 1	**Lease Type:** FEDERAL	**Lease #:** NMNM114988	
	NS-Foot: 330	**NS Indicator:** FSL	
	EW-Foot: 380	**EW Indicator:** FEL	

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

Twsp: 26S **Range:** 33E **Section:** 12

Aliquot: SESE **Lot:** **Tract:**

APD ID: 10400005998 **Submission Date:** 10/14/2016

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

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

Section 1 - Geologic Formations

ID: Surface formation **Name:** UNKNOWN

Lithology(ies):

OTHER - SURFACE

Elevation: 3325 **True Vertical Depth:** 0 **Measured Depth:** 0

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 1 **Name:** RUSTLER

Lithology(ies):

ANHYDRITE

Elevation: 2406 **True Vertical Depth:** 919 **Measured Depth:** 919

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 2 **Name:** TOP OF SALT

Lithology(ies):

SALT

Elevation: 2041 **True Vertical Depth:** 1284 **Measured Depth:** 1284

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 3 **Name:** BASE OF SALT

Lithology(ies):

SALT

Elevation: -1629 **True Vertical Depth:** 4954 **Measured Depth:** 4954

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 4 **Name:** DELAWARE

Lithology(ies):

SANDSTONE

Elevation: -1839 **True Vertical Depth:** 5164 **Measured Depth:** 5164

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 5 **Name:** BRUSHY CANYON LOWER

Lithology(ies):

SANDSTONE

Elevation: -5919 **True Vertical Depth:** 9244 **Measured Depth:** 9244

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 6 **Name:** BONE SPRING LIME

Lithology(ies):

LIMESTONE

Elevation: -6069 **True Vertical Depth:** 9394 **Measured Depth:** 9394

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 7 **Name:** BONE SPRING

Lithology(ies):

SANDSTONE

Elevation: -7004 **True Vertical Depth:** 10329 **Measured Depth:** 10329

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 8 **Name:** BONE SPRING

Lithology(ies):

LIMESTONE

Elevation: -7264 **True Vertical Depth:** 10589 **Measured Depth:** 10589

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 9 **Name:** BONE SPRING 2ND

Lithology(ies):

SANDSTONE

Elevation: -7634 **True Vertical Depth:** 10959 **Measured Depth:** 10959

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 10 **Name:** BONE SPRING 3RD

Lithology(ies):

SANDSTONE

Elevation: -8644 **True Vertical Depth:** 11969 **Measured Depth:** 11969

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 11 **Name:** WOLFCAMP

Lithology(ies):

SHALE

Elevation: -9114 **True Vertical Depth:** 12439 **Measured Depth:** 12439

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? Y

ID: Formation 12 **Name:** WOLFCAMP

Lithology(ies):

SHALE

Elevation: -9414 **True Vertical Depth:** 12739 **Measured Depth:** 12739

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? Y

Section 2 - Blowout Prevention

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

Pressure Rating (PSI): 5M **Rating Depth:** 12684

Equipment: 5M rotating head, mud-gas separator, panic line,and flare will be rigged up prior to drilling out surface casing.

Requesting Variance? YES

Variance request: 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.
Testing Procedure: A multibowl wellhead may be 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. Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi. • Wellhead will be installed by wellhead representatives. • If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal. • Wellhead representative will install the test plug for the initial BOP test. • Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time. • If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted. • Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating. • Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2. After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2. After running the 9-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead. The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Choke Diagram Attachment:

Seawolf 1-12 Fed 86H_5M BOPE CK_10-14-2016.pdf

BOP Diagram Attachment:

Seawolf 1-12 Fed 86H_5M BOPE CK_10-14-2016.pdf

Pressure Rating (PSI): 5M **Rating Depth:** 12684

Equipment: 5M rotating head, mud-gas separator, panic line,and flare will be rigged up prior to drilling out surface casing.

Requesting Variance? YES

Variance request: 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.
Testing Procedure: A multibowl wellhead may be 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. Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi. • Wellhead will be installed by wellhead representatives. • If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal. • Wellhead representative will install the test plug for the initial BOP test. • Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple

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Choke Diagram Attachment:

Seawolf 1-12 Fed 86H_5M BOPE CK_10-14-2016.pdf

BOP Diagram Attachment:

Seawolf 1-12 Fed 86H_5M BOPE CK_10-14-2016.pdf

Section 3 - Casing

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

String Type: SURFACE **Other String Type:**

Hole Size: 17.5

Top setting depth MD: 0 **Top setting depth TVD:** 0

Top setting depth MSL: -9354

Bottom setting depth MD: 1000 **Bottom setting depth TVD:** 1000

Bottom setting depth MSL: -10354

Calculated casing length MD: 1000

Casing Size: 13.375 **Other Size**

Grade: H-40 **Other Grade:**

Weight: 48

Joint Type: STC **Other Joint Type:**

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

Safety Factors

Collapse Design Safety Factor: 1.59 **Burst Design Safety Factor:** 3.46

Joint Tensile Design Safety Factor type: BUOYANT **Joint Tensile Design Safety Factor:** 2.11

Body Tensile Design Safety Factor type: BUOYANT **Body Tensile Design Safety Factor:** 2.11

Casing Design Assumptions and Worksheet(s):

Seawolf 1-12 Fed 86H_Surf Csg Ass_10-14-2016.docx

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

String Type: INTERMEDIATE **Other String Type:**

Hole Size: 12.25

Top setting depth MD: 0 **Top setting depth TVD:** 0

Top setting depth MSL: -9354

Bottom setting depth MD: 11400 **Bottom setting depth TVD:** 11400

Bottom setting depth MSL: -20754

Calculated casing length MD: 11400

Casing Size: 9.625 **Other Size**

Grade: P-110 **Other Grade:**

Weight: 40

Joint Type: OTHER **Other Joint Type:** BTC

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

Safety Factors

Collapse Design Safety Factor: 1.25 **Burst Design Safety Factor:** 1.59

Joint Tensile Design Safety Factor type: BUOYANT **Joint Tensile Design Safety Factor:** 2.58

Body Tensile Design Safety Factor type: BUOYANT **Body Tensile Design Safety Factor:** 2.58

Casing Design Assumptions and Worksheet(s):

Seawolf 1-12 Fed 86H_Int Csg Ass_10-14-2016.docx

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

String Type: PRODUCTION **Other String Type:**

Hole Size: 8.75

Top setting depth MD: 0 **Top setting depth TVD:** 0

Top setting depth MSL: -9354

Bottom setting depth MD: 22554 **Bottom setting depth TVD:** 12679

Bottom setting depth MSL: -22018

Calculated casing length MD: 22554

Casing Size: 5.5 **Other Size**

Grade: P-110 **Other Grade:**

Weight: 20

Joint Type: OTHER **Other Joint Type:** BTC

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

Safety Factors

Collapse Design Safety Factor: 1.27 **Burst Design Safety Factor:** 1.26

Joint Tensile Design Safety Factor type: BUOYANT **Joint Tensile Design Safety Factor:** 1.83

Body Tensile Design Safety Factor type: BUOYANT **Body Tensile Design Safety Factor:** 1.83

Casing Design Assumptions and Worksheet(s):

Seawolf 1-12 Fed 86H_Prod Csg Ass_10-14-2016.docx

Section 4 - Cement

Casing String Type: SURFACE

Stage Tool Depth:

Lead

Top MD of Segment: 0 **Bottom MD Segment:** 1000 **Cement Type:** C

Additives: 1% Calcium Chloride **Quantity (sks):** 780 **Yield (cu.ff./sk):** 1.34

Density: 14.8 **Volume (cu.ft.):** 1042 **Percent Excess:** 50

Casing String Type: INTERMEDIATE

Stage Tool Depth:

Lead

Top MD of Segment: 0 **Bottom MD Segment:** 9400 **Cement Type:** C

Additives: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sks Poly-E-Flake **Quantity (sks):** 1600 **Yield (cu.ff./sk):** 2.31

Density: 11.9 **Volume (cu.ft.):** 3680 **Percent Excess:** 30

Tail

Bottom MD Segment: 11400 **Cement Type:** C

Top MD of Segment: 9400 **Quantity (sks):** 590 **Yield (cu.ff./sk):** 1.33

Additives: 0.125 lbs/sks Poly-R-Flake **Volume (cu.ft.):** 783 **Percent Excess:** 30

Density: 14.8

Casing String Type: PRODUCTION

Stage Tool Depth:

Lead

Top MD of Segment: 11200 **Bottom MD Segment:** 12300 **Cement Type:** C

Additives: Enhancer 923 + 10% BWOC Bentonite + 0.05% BWOC SA-1015 + 0.3% BWOC HR-800 + 0.2% BWOC FE-2 + 0.125 lb/sk Pol-E-Flake + 0.5 lb/sk D-Air 5000 **Quantity (sks):** 135 **Yield (cu.ff./sk):** 2.31

Density: 11.9 **Volume (cu.ft.):** 305 **Percent Excess:** 25

Tail

Bottom MD Segment: 22554 **Cement Type:** H

Quantity (sks): 2370 **Yield (cu.ff./sk):** 1.2

Top MD of Segment: 12300 **Volume (cu.ft.):** 2842 **Percent Excess:** 25

Additives: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite

Density: 14.5

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: N/A

Circulating Medium Table

Top Depth: 0

Bottom Depth: 1000

Mud Type: WATER-BASED MUD

Min Weight (lbs./gal.): 8.4

Max Weight (lbs./gal.): 8.5

Density (lbs/cu.ft.):

Gel Strength (lbs/100 sq.ft.):

PH:

Viscosity (CP): 2

Filtration (cc):

Salinity (ppm):

Additional Characteristics:

Top Depth: 1000

Bottom Depth: 11400

Mud Type: OIL-BASED MUD

Min Weight (lbs./gal.): 8.4

Max Weight (lbs./gal.): 9

Density (lbs/cu.ft.):

Gel Strength (lbs/100 sq.ft.):

PH:

Viscosity (CP): 2

Filtration (cc):

Salinity (ppm):

Additional Characteristics:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

Top Depth: 11400 **Bottom Depth:** 22554

Mud Type: OIL-BASED MUD

Min Weight (lbs./gal.): 10.5 **Max Weight (lbs./gal.):** 11

Density (lbs/cu.ft.): **Gel Strength (lbs/100 sq.ft.):**

PH: **Viscosity (CP):** 12

Filtration (cc): **Salinity (ppm):**

Additional Characteristics:

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

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.

List of open and cased hole logs run in the well:

GR,MUDLOG

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7200 **Anticipated Surface Pressure:** 4404.02

Anticipated Bottom Hole Temperature(F): 165

Anticipated abnormal proessures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Seawolf 1-12 Fed 86H_H2S Plan_10-14-2016.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Seawolf 1-12 Fed 86H_Directional Plan_10-14-2016.pdf

Other proposed operations facets description:

ANTI COLLISION PLAN
MULTI BOWL WELLHEAD
MULTIBOWL VERBIAGE
CLOSED LOOP DESIGN PLAN

Other proposed operations facets attachment:

Seawolf 1-12 Fed 86H_MB Verb_10-14-2016.pdf
Seawolf 1-12 Fed 86H_MB Wellhd_10-14-2016.pdf
Seawolf 1-12 Fed 86H_Clsd Loop_10-14-2016.pdf
Seawolf 1-12 Fed 86H_AC Report_10-14-2016.pdf

Other Variance attachment:

Seawolf 1-12 Fed 86H_Co-flex_10-14-2016.pdf

APD ID: 10400005998 **Submission Date:** 10/14/2016

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

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

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Seawolf 1-12 Fed 86H_Access Rd Map_10-14-2016.pdf

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

ROW ID(s)

ID:

Do the existing roads need to be improved? YES

Existing Road Improvement Description: Improve road to accommodate Drilling and Completion operations.

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Seawolf 1-12 Fed 86H_one mile map_10-14-2016.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

Existing Wells description:

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Estimated Production Facilities description:

Production Facilities description: Seawolf 1-12 BS CTB 1 Plat, Battery Connect, Battery Connect Electric, Pad Connect Electric, Flowline (buried). Location is not affected by other Seawolf well location changes. Location is currently accurate.
Production Facilities map:

Seawolf 1-12 Fed 86H_BAT_CON_ELE_10-14-2016.pdf

Seawolf 1-12 Fed 86H_CTB Batt Conn_10-14-2016.PDF

Seawolf 1-12 Fed 86H_Flowline_10-14-2016.pdf

Seawolf 1-12 Fed 86H_PAD_CONN ELE_10-14-2016.PDF

Seawolf 1-12 Fed 86H_Seawolf_1-12_BS_CTB_1_Plat_10-14-2016.PDF

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: STIMULATION **Water source type:** RECYCLED

Describe type:

Source latitude: **Source longitude:**

Source datum:

Water source permit type: OTHER

Source land ownership: FEDERAL

Water source transport method: PIPELINE

Source transportation land ownership: FEDERAL

Water source volume (barrels): 350000 **Source volume (acre-feet):** 45.112583

Source volume (gal): 14700000

Water source and transportation map:

SEAWOLF 1-12 FED 86H_Water Map_11-16-2016.pdf

Water source comments: The attached Water Transfer Map is a proposal only and the final route and documentation will be provided by a Devon contractor prior to installation. When available Devon will always follow existing disturbance.
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:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description: Dirt fill and caliche will be used to construct well pad. Caliche will be supplied by the Federal Pit on Section 7-26S-34E; SWNE & SENE
Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Water and oil based cuttings

Amount of waste: 1600 barrels

Waste disposal frequency : Daily

Safe containment description: N/A

Safe containmant attachment:

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

Disposal location description: All cutting will be disposed of at R360, Sundance, or equivalent.

Waste type: FLOWBACK

Waste content description: Average produced BWPD over the flowback period (first 30 days of production).

Amount of waste: 4000 barrels

Waste disposal frequency : Daily

Safe containment description: N/A

Safe containmant attachment:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

Waste disposal type: OFF-LEASE INJECTION **Disposal location ownership:** STATE

Disposal type description:

Disposal location description: Produced water during flowback will be disposed of at our Rattlesnake 16 SWD.

Waste type: COMPLETIONS/STIMULATION

Waste content description: Flow back water during completion operations.

Amount of waste: 3000 barrels

Waste disposal frequency : One Time Only

Safe containment description: N/A

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Various disposal locations in Lea and Eddy counties.

Waste type: PRODUCED WATER

Waste content description: Average produced BWPD over the first year of production.

Amount of waste: 1200 barrels

Waste disposal frequency : Daily

Safe containment description: N/A

Safe containmant attachment:

Waste disposal type: OFF-LEASE INJECTION **Disposal location ownership:** STATE

Disposal type description:

Disposal location description: Produced water will be primarily disposed of at our Rattlesnake 16 SWD. At certain times during the year, some of the water will be recycled and used for drilling/completion operations. This recycle facility is at the same location as the SWD (state).

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? NO

Description of cuttings location

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

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Seawolf 1-12 Fed 86H_Rig Layout_11-16-2016.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: NEW

Recontouring attachment:

Seawolf 1-12 Fed 86H_Interim Recl_10-14-2016.pdf

Drainage/Erosion control construction: N/A

Drainage/Erosion control reclamation: N/A

Wellpad long term disturbance (acres): 2.086 **Wellpad short term disturbance (acres):** 4.156

Access road long term disturbance (acres): 0 **Access road short term disturbance (acres):** 0

Pipeline long term disturbance (acres): 1.6072108 **Pipeline short term disturbance (acres):** 1.6072108

Other long term disturbance (acres): 0 **Other short term disturbance (acres):** 0

Total long term disturbance: 3.6932108 **Total short term disturbance:** 5.763211

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

Reconstruction method: Operator will use Best Management Practices"BMP" to mechanically recontour to obtain the desired outcome.
Topsoil redistribution: Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.
Soil treatment: Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.
Existing Vegetation at the well pad: Shinnery, yucca, grasses and mesquite.

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Shinnery, yucca, grasses and mesquite.

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Shinnery, yucca, grasses and mesquite.

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: Shinnery, yucca, grasses and mesquite.

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

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: RICHARD **Last Name:** WEDMAN

Phone: (575)748-1819 **Email:** RICHARD.WEDMAN@DVN.COM

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: Maintain weeds on an as need basis.

Weed treatment plan attachment:

Monitoring plan description: Monitor as needed.

Monitoring plan attachment:

Success standards: N/A

Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

Disturbance type: PIPELINE

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other Information

Right of Way needed? YES **Use APD as ROW?** YES

ROW Type(s): 288100 ROW – O&G Pipeline,FLPMA (Powerline),Other

ROW Applications

SUPO Additional Information: Seawolf 1-12 BS CTB 1 Plat, Battery Connect, Battery Connect Electric, Pad Connect Electric, Flowline (buried). Location is not affected by other Seawolf well location changes. Location is currently accurate.
Use a previously conducted onsite? YES

Previous Onsite information: Previous OnSite 7/20/2016

Other SUPO Attachment

Seawolf 1-12 Fed 86H_CTB Batt Conn_10-14-2016.PDF

Seawolf 1-12 Fed 86H_Flowline_10-14-2016.pdf

Seawolf 1-12 Fed 86H_PAD_CONN ELE_10-14-2016.PDF

Seawolf 1-12 Fed 86H_Seawolf_1-12_BS_CTB_1_Plat_10-14-2016.PDF

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SEAWOLF 1-12 FED **Well Number:** 86H

Seawolf 1-12 Fed 86H_BAT_CON_ELE_10-14-2016.pdf

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:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

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:

AFMSS

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

Bond Info Data Report

04/19/2017

Bond Information

Federal/Indian APD: FED

BLM Bond number: CO1104

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

Continental CONTITECH

Fluid Technology

ContiTech Beattie Corp.
Website: www.contitechbeattie.com

Monday, June 14, 2010

RE: Drilling & Production Hoses
Lifting & Safety Equipment

To Helmerich & Payne,

A Continental ContiTech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly it is good practice to use lifting & safety equipment but not mandatory

Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

Robin Hodgson
Sales Manager
ContiTech Beattie Corp

ContiTech Beattie Corp,
11535 Brittmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com

RIG 212

PHOENIX

QUALITY DOCUMENT

PHOENIX RUBBER INDUSTRIAL LTD.

6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152
Phone: (3662) 566-737 • Fax: (3662) 566-738

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44. Hungary • H-1440 Budapest, P. O. Box 26
Phone: (361) 456-4200 · Fax: (361) 217-2972, 456-4273 · www.taurusemerge.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 552
PURCHASER: Phoenix Beattie Co.				P.O. N°: 1519FA-871
PHOENIX RUBBER order N°: 170466		HOSE TYPE: 3" ID		Choke and Kill Hose
HOSE SERIAL N°: 34128		NOMINAL / ACTUAL LENGTH:		11,43 m
W.P. 68,96 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 = 25 MPa

COUPLINGS

Type	Serial N°	Quality	Heat N°
3" coupling with	720 719	AISI 4130	C7626
4 1/16" Flange end		AISI 4130	47357

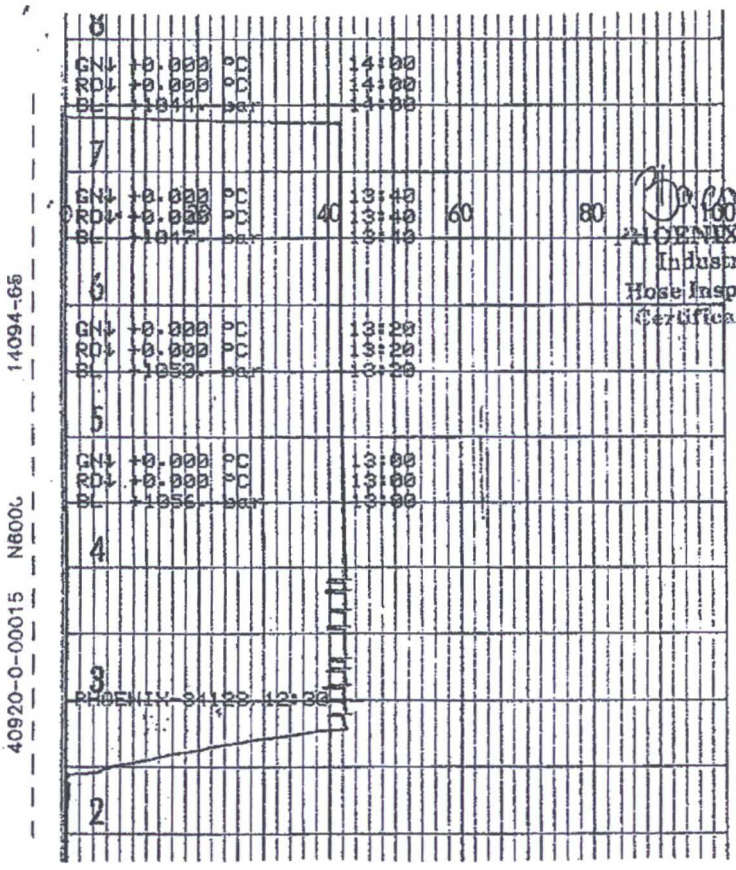
API Spec 16 C
Temperature rate:"B"

All metal parts are flawless

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

Date:	Inspector	Quality Control
29. April. 2002.		PHOENIX RUBBER Industrial Ltd. Hose Inspection and Verification Dept.

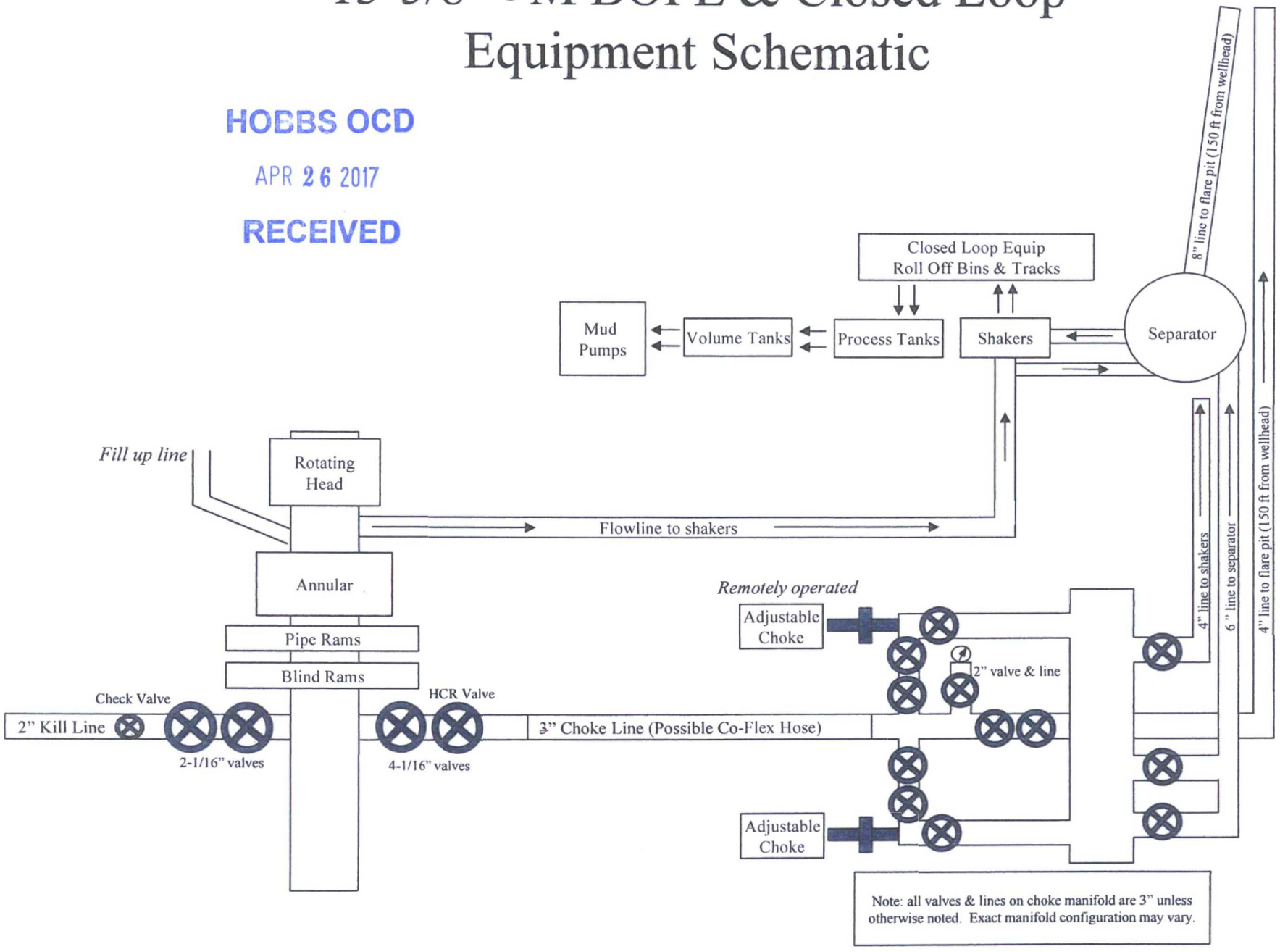
VERIFIED TRUE COPY
PHOENIX RUBBER Q.C.



PHOENIX RUBBER
Industrial Ltd.
Hose Inspection and
Certification Dept.

VERIFIED TRUE COPY
PHOENIX RUBBER LTD.

13-5/8" 5M BOPE & Closed Loop Equipment Schematic



A multibowl wellhead may be 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.

Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.
After running the 9-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.