District I
625 N. French Dr., Hobbs, NM 88240
District II
301 W. Grand Avenue, Artesia, NM 88210
District III
000 Rio Brazos Rd., Aztec, NM 87410
District IV
220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Oil Conservation Divsiion
1220 S. St. Francis Dr.
Santa Fe, NM 87505

Form C-101
June 16, 2008

HOBBSOCD Submit to appropriate District Office

FEB 2 4 2015

RECEIVED

☐ AMENDED REPORT

# APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

| [1] Operator Name and Address | [2] OGRID Number |
|---|---|
| Occidental Permian Ltd.<br>P.O. Box 4294, Houston, TX 77210-4294 | 157984 |
| | [3] API Number<br>30- 025- 42454 |

| [4] Property Code | [5] Property Name | [6] Well No. |
|---|---|---|
| 19520 | North Hobbs G/SA Unit | 958 |

| [9] Proposed Pool 1 | [10] Proposed Pool 2 |
|---|---|
| Hobbs; Grayburg - San Andres (31920) | |

## Surface Location

| UL or lot no. | Section | Township | Range | Lot. Idn | Feet from the | North/South Line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| H | 19 | 18-S | 38-E | | 1929 | North | 741 | East | Lea |

## Proposed Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot. Idn | Feet from the | North/South Line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

## Additional Well Location

| [11] Work Type Code | [12] Well Type Code | [13] Cable/Rotary | [14] Lease Type Code | [15] Ground Level Elevation |
|---|---|---|---|---|
| N | O | R | P | 3650.8' |
| **[16] Multiple** | **[17] Proposed Depth** | **[18] Formation** | **[19] Contractor** | **[20] Spud Date** |
| No | 4700' | San Andres | H&P 340 | June, 2015 |

## [1] Proposed Casing and Cement Program

| Hole Size | Casing Size | Casing weight/foot | Setting Depth | Sacks of Cement | Estimated TOC |
|---|---|---|---|---|---|
| | | | | | |
| 12-1/4 | 9-5/8 | 36 | 1650 | 630 | Surface |
| | | | | | |
| 8-3/4 | 7 | 26 | 4700 | 790 | Surface |
| | | | | | |

[2] Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

BOP type is blind ram-pipe ram-annular (National Oilwell Varco)
3000 psi working pressure, 3000 psi test pressure for rams, 2100 psi test pressure for annular

During this procedure, Oxy plans to use a closed-loop system with steel tanks and haul contents to the required disposal facility per OCD Rule 19.15.17 (closed-loop system schematic attached)

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: Mark Stephens
Printed name: Mark Stephens
Title: Regulatory Compliance Analyst
E-mail Address: Mark_Stephens@oxy.com
Date: 2/23/15
Phone: (713) 366-5158

OIL CONSERVATION DIVISION

Approved by:
Title: Petroleum Engineer
Approval Date: 02/25/15
Expiration Date: 02/25/17
Conditions of Approval Attached ☐

See Attached Conditions of Approval

FEB 26 2015

CONDITIONS OF APPROVAL

| API # | Operator | Well name & Number |
|---|---|---|
| 30-025-42454 | Occidental Permian LTD | North Hobbs G/SA Unit # 958 |

Applicable conditions of approval marked with XXXXXX

Administrative Orders Required

| | |
|---|---|
| XXXXXXXX | If using a pit for drilling and completion operations, must have an approved pit form prior to spudding the well |
| | |

Other wells

| | |
|---|---|
| | |

Drilling

| | |
|---|---|
| XXXXXXX | Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string |
| | |

Casing

| | |
|---|---|
| XXXXXXX | SURFACE CASING - Cement must circulate to surface -- |
| XXXXXXX | PRODUCTION CASING - Cement must circulate to surface -- |
| XXXXXXX | If cement does not circulate to surface, must run temperature survey or other log to determine top of cement |
| | South Area |
| XXXXXXX | Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water |

# APD DATA – DRILLING PLAN



**OPERATOR NAME / NUMBER:** OXY USA WTP LP

**LEASE NAME / NUMBER: North Hobbs G/SA Unit #958**

**STATE: NM** **COUNTY: Lea**

**SURFACE LOCATION:** **1929' FNL & 741' FEL, Sec 19, T18S, R38E**

**SL:** **Lat:** **32.7348031'N** **LONG:** **103.1812048'W**
**X:** **854286.21** **Y:** **632958.66** **New Mexico East NAD 1927**

**C-102 PLAT APPROX GR ELEV:** 3650.8'

**EST KB ELEV**: 3667.3' (16.5' KB)

## 1. GEOLOGIC NAME OF SURFACE FORMATION

a. Permian

## 2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS

| Formation | TV Depth Top* | Expected Fluids |
|---|---|---|
| Base Red Beds | 237 | Fresh Water |
| Rustler | 1552 | Formation Fluid |
| Top of Salt | 1637 | Formation Fluid |
| Base of Salt | 2727 | Formation Fluid |
| Queen | 3502 | Formation Fluid |
| Grayburg | 3847 | Formation Fluid |
| Basal Grayburg | 4037 | Formation Fluid |
| San Andres | 4137 | Hydrocarbon |
| TD | 4700 | TD |

*Note: Depths are below GL.

A. Fresh Water formations will be covered with the 16" conductor pipe, which will be set at 53' prior to spud.

**GREATEST PROJECTED TD** 4700' MD / 4700' TVD **OBJECTIVE**: San Andres

## 3. CASING PROGRAM

Surface Casing: 9.625" 36# J55 LTC casing set at ± 1650' MD/ 1650' TVD in a 12.25" hole filled with 9.5 ppg mud
Production Casing: 7" 26# J55 LTC casing set at ± 4700'MD/ 4700'TVD in a 8.75" hole filled with 10.5 ppg mud

| String | OD (in) | ID (in) | Coupling OD (in) | Drift (in) | Weight (#/ft) | Grade | CXN | Burst (psi) | Collapse (psi) | Tension (k-lbs) | Torque (ft-lbs) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Minimum | Optimum | Maximum |
| Conductor | 16 | 15.25 | 17 | 14.5 | 65 | H40 | Weld | 1640 | 670 | 736 | 4390 | 4390 | 4390 |
| Surface | 9.625 | 8.921 | 10.625 | 8.765 | 36 | J55 | LTC | 3520 | 2020 | 564 | 3400 | 4530 | 5660 |
| Production | 7 | 6.276 | 7.656 | 6.151 | 26 | J55 | LTC | 4980 | 4320 | 415 | 2750 | 3670 | 4590 |

## 4. CEMENT PROGRAM:

**Surface Interval**

| Interval | Amount sks | Ft of Fill | Type | Gal/Sk | PPG | $Ft^3/sk$ | 24 Hr Comp |
|---|---|---|---|---|---|---|---|
| **Surface (TOC: 0' – 1577')** | | | | | | | |
| **Lead:**<br>**0' – 1180'**<br>100% Excess | 430 | 1180 | Premium Plus Cement:<br>94 lbm/sk Premium Plus Cement<br>4 % Bentonite (Light Weight Additive)<br>1 % Calcium Chloride - Flake(Accelerator)<br>0.125 lbm/sk Poly-E-Flake (LC Additive) | 9.11 | 13.5 | 1.73 | 824 psi |
| **Tail:**<br>**1180' – 1577'**<br>100% Excess | 200 | 397 | Premium Plus Cement:<br>94 lbm/sk Premium Plus Cement,<br>1 % Calcium Chloride - Flake | 6.36 | 14.8 | 1.34 | 1926 psi |

**Production Interval**

| Interval | Amount sks | Ft of Fill | Type | Gal/Sk | PPG | $Ft^3/sk$ | 24 Hr Comp |
|---|---|---|---|---|---|---|---|
| **Production (TOC: 0' - 4600')** | | | | | | | |
| **Stage 1**<br>**Primary:**<br>**3822'-4600'**<br>85% Excess | 210 | 778 | Poz Premium Plus Cement<br>50/50 Poz Premium Plus Cement<br>0.6 lbm/sk LAP-1 (LC Additive)<br>0.3 lbm/sk CFR-3 (Dispersant)<br>0.25 lbm/sk D-AIR 3000 (Defoamer)<br>0.125 lbm/sk Poly-E-Flake (LC Additive) | 4.69 | 14.8 | 1.123 | 1181 psi |
| **Stage 2**<br>**Lead:**<br>**0' – 1577'**<br>10 % Excess<br>**1577' – 2827'**<br>200 % Excess | 360 | 2827 | Interfill C<br>0.125 lbm/sk Poly-E-Flake (LC.)<br>0.5 % Halad(R)-322 (LC Additive)<br>0.5 lbm/sk D-AIR 5000 (Defoamer) | 13.4 | 11.9 | 2.394 | 249 psi |
| **Stage 2**<br>**Tail:**<br>**2827'-3822'**<br>100 % Excess | 220 | 995 | Premium Plus Cement<br>94 lbm/sk Premium Plus Cement<br>0.2 % WellLife 734 (Cement Enhancer)<br>5 lbm/sk Microbond (Expander)<br>0.3 % Econolite (Light Weight Additive)<br>0.3 % CFR-3 (Dispersant) | 7.7 | 14.20 | 1.547 | 1186 psi |

## 5. PRESSURE CONTROL EQUIPMENT

**Surface: 0 – 1650'** None.

**Production: 1650' - 4700'** The minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required to drill below the surface casing shoe shall be 3000 (3M) psi (including annular).

| Casing Size (in.) | Wellhead Flange | | BOP Stack | | | Pressure Test (psi) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Size (in.) | Pressure (psi) | Type[1] | Size (in.) | Pressure (psi) | Initial | | Subsequent | |
| | | | | | | Rams | Ann | Rams | Ann |
| 9 5/8" | 11" | 3000 | R, R, A, G | 11" | 5000 | 250/**3000** | 250/**2100** | 250/**3000** | 250/**2100** |

**a.** The 11" 3000 psi blowout prevention equipment will be installed and operational after setting the 9 5/8" surface casing and the 9 5/8" SOW x 11" 3K wellhead. A modified Wellhead System with 7" Mandrel Hanger will be used.

**b.** The BOP and auxiliary BOPE will be tested by a third party upon installation to the 9 5/8" 36# J-55 surface casing. All equipment will be tested to 250/3000 psi (Annular to 250/2100 psi) for 10 minutes.

**c.** The pipe rams will be functionally tested during each 24 hour period; the blind rams will be functionally tested on each trip out of the hole. These functional tests will be documented on the Daily Driller's Log. Other accessory equipment (BOPE) will include a safety valve and subs as needed to fit all drill strings, and a 2" kill line and 3" choke line having a 3000 psi WP rating.

**d.** See attached BOP & Choke manifold diagrams.

## 6. MUD PROGRAM:

| Depth (ft) | Mud Weight (ppg) | Viscosity (sec/qt) | Fluid Loss (cc's) | pH | Mud System |
|---|---|---|---|---|---|
| 0 – 1500 | 8.4 – 9.5 | 28 – 30 | N/C | <9.0 | Freshwater / Sweeps |
| 1500 - 1650 | 8.8 – 9.5 | 32 – 40 | < 25 | <9.0 | FW – Native Mud |
| 1600 – 3600 | 9.8 – 10.0 | 28 – 32 | N/C | 10.0 – 11.0 | Brine Water / Sweeps |
| 3600 - 4700 | 10.0 – 10.5 | 36 - 45 | <8 | 10.5 – 11.0 | Salt Gel / Starch |

Remarks: Pump high viscosity sweeps as needed for hole cleaning. The necessary mud products for additional weight and fluid loss control will be on location at all times.

A. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

## 7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT

**a.** A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times.

**b.** Hydrogen sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached. If Hydrogen Sulfide is encountered, measured amounts and formations will be reported to the REGULATORY AGENCIES.

## 8. LOGGING / CORING AND TESTING PROGRAM:

A. Mud Logger: None.

B. DST's: None.

C. Open Hole Logs as follows: May have triple combo for production section surface to TD. Spectral GR from B. Grayburg to TD.

## 9. POTENTIAL HAZARDS:

A. H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. Breathing equipment will be on location from drilling out the surface shoe until production casing is cemented. If H2S is encountered the operator will comply with Onshore Order #6.

B. The MASP will be 1254psi and BOP test (MASP + 500) will be 1754psi

C. No abnormal temperatures or pressures are anticipated. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

## 10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS

Road and location construction will begin after Oxy has submitted APD. Anticipated spud date will be as soon as possible after approval and as soon as a rig will be available. Move in operations and drilling is expected to take 10 days. If production casing is run, then an additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.

## 11. COMPANY PERSONNEL:

| Name | Title | Office Phone |
|---|---|---|
| Edgar Diaz-Aguirre | Drilling Engineer | 713-840-3037 |
| Adriano Celli | Drilling Engineer Supervisor | 713-985-6371 |
| Kevin Videtich | Drilling Superintendent | 713-350-4761 |
| Chad Frazier | Drilling Manager | 713-215-7357 |

## Mathew, Roni

**From:** Hayes, William P
**Sent:** Sunday, February 22, 2015 2:23 PM
**To:** Mathew, Roni
**Subject:** RE: Surface Ownership Request

Roni,

I am your contact for both the Willard and Denver Unit.

The 1701 is on OXY property.

The 3631 is on Exxon property (see attachment).

---

**From:** Mathew, Roni
**Sent:** Wednesday, February 18, 2015 9:13 AM
**To:** Hayes, William P
**Subject:** Surface Ownership Request

Hi Will,

As there is an intent to plug, please provide surface ownership for the 2 Denver Unit wells noted below:

Denver Unit well # 1701
API #: 42-501-02210

Denver Unit well # 3631
API #: 42-501-31124

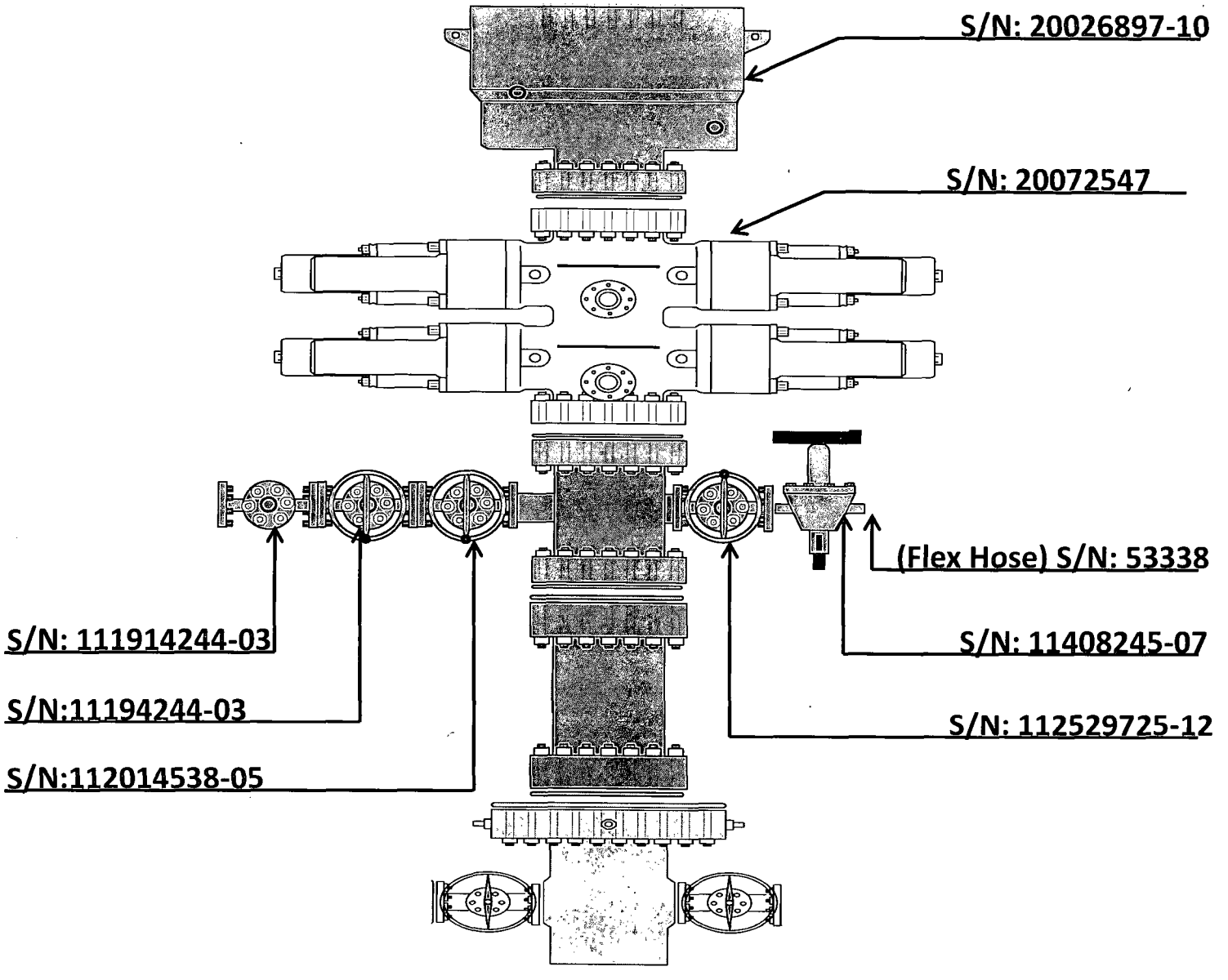
Will you be our land contact for both Willard and Denver Unit? Please let me know if you have any questions and thanks for your help Will.

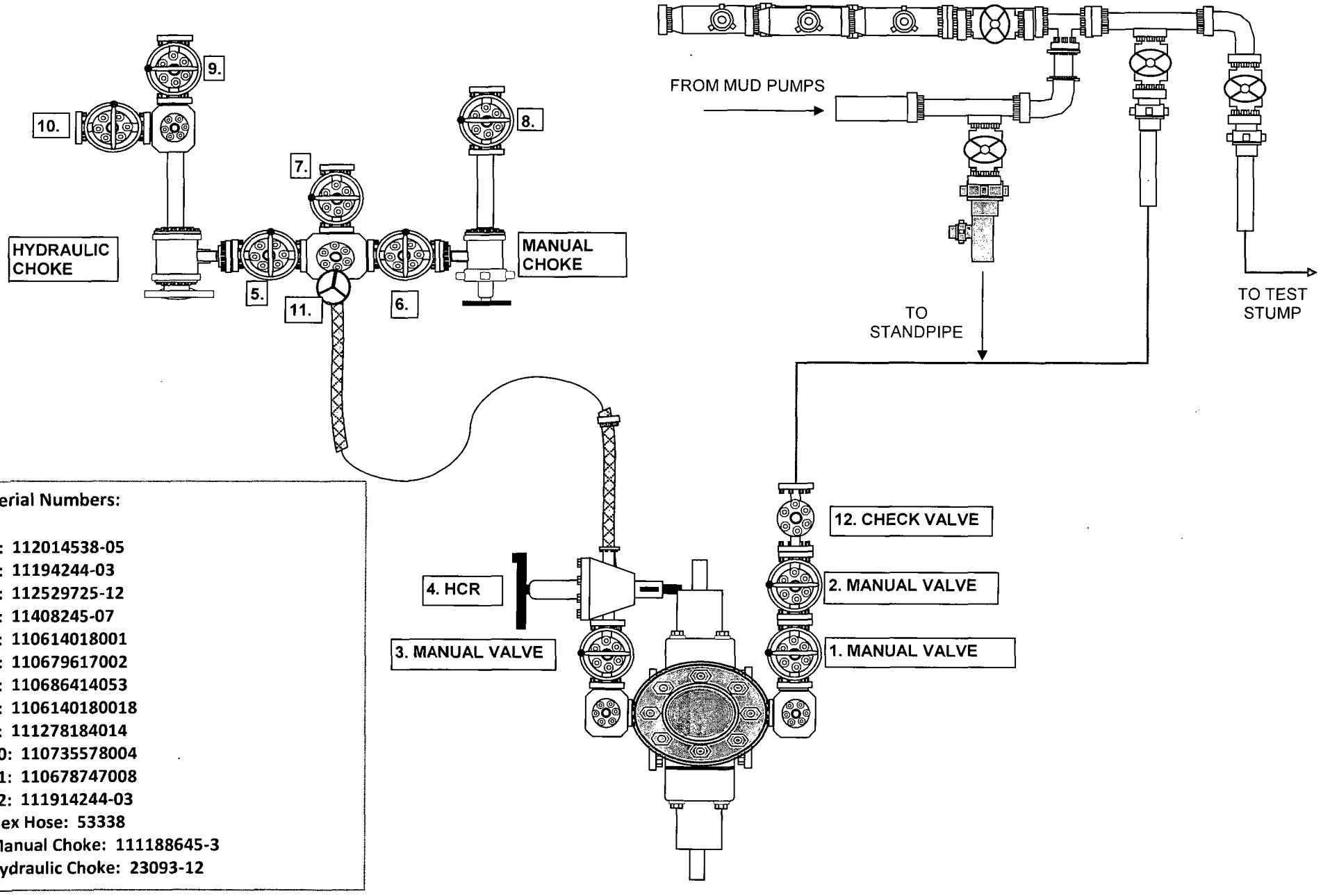
Roni

Roni Mathew | Oxy USA Inc. | Permian EOR HES Regulatory | Office - 713.215.7827 | Fax - 713.985.7827 | Location - 28.001 | roni_mathew@oxy.com

# H&P 340 BOP Diagram








**Serial Numbers:**

1: 112014538-05
2: 11194244-03
3: 112529725-12
4: 11408245-07
5: 110614018001
6: 110679617002
7: 110686414053
8: 1106140180018
9: 111278184014
10: 110735578004
11: 110678747008
12: 111914244-03
Flex Hose: 53338
Manual Choke: 111188645-3
Hydraulic Choke: 23093-12

# Certificate of Conformance

S/N: 20072547-310

BOP ASSY, 11-5M, DBL, LXT, SXF W/(4) 3-5M FO

| | |
|---|---|
| RIG | TBD |
| SALES ORDER NUMBER | 824265 |
| SALES ORDER LINE ITEM NUMBER | 0012 |
| CLIENT DOCUMENT NUMBER | PO #340-352-002 |
| SERIAL NUMBER | 20072547-310 |
| DOCUMENT PART NUMBER | **29010000** |

| REFERENCE | REFERENCE DESCRIPTION |
|---|---|
| S/N:20072547-310 | BOP ASSY, 11-5M, DBL, LXT, SXF, W/(4) 3-5M FO |



**National Oilwell Varco**
12950 W. Little York
Houston, TX 77041
Phone 713-937-5000
Fax 713-849-6147

| DOCUMENT NUMBER | REV |
|---|---|
| **20072547-310-COC-001** | **01** |

NATIONAL OILWELL VARCO

www.nov.com

| Document number | 20072547-310-COC-001 |
|---|---|
| Revision | 01 |

## NOV CERTIFICATE OF CONFORMANCE

| Certificate of Conformance | |
|---|---|
| Equipment Name | BOP ASSY, 11-5M, DBL, LXT, SXF, W/ (4) 3-5M FO |
| Part Number | 20072547 |
| Serial Number | 20072547-310 |
| Customer | HELMERICH AND PAYNE INT'L DRILLING |
| Rig | TBD |
| Customer Purchase Order | 340-352-002 |
| NOV Sales Order | 824265 |
| Date of Manufacturing | JUNE 2010 |
| Quantity | 1 (ONE) |

NOV certifies that the above equipment:

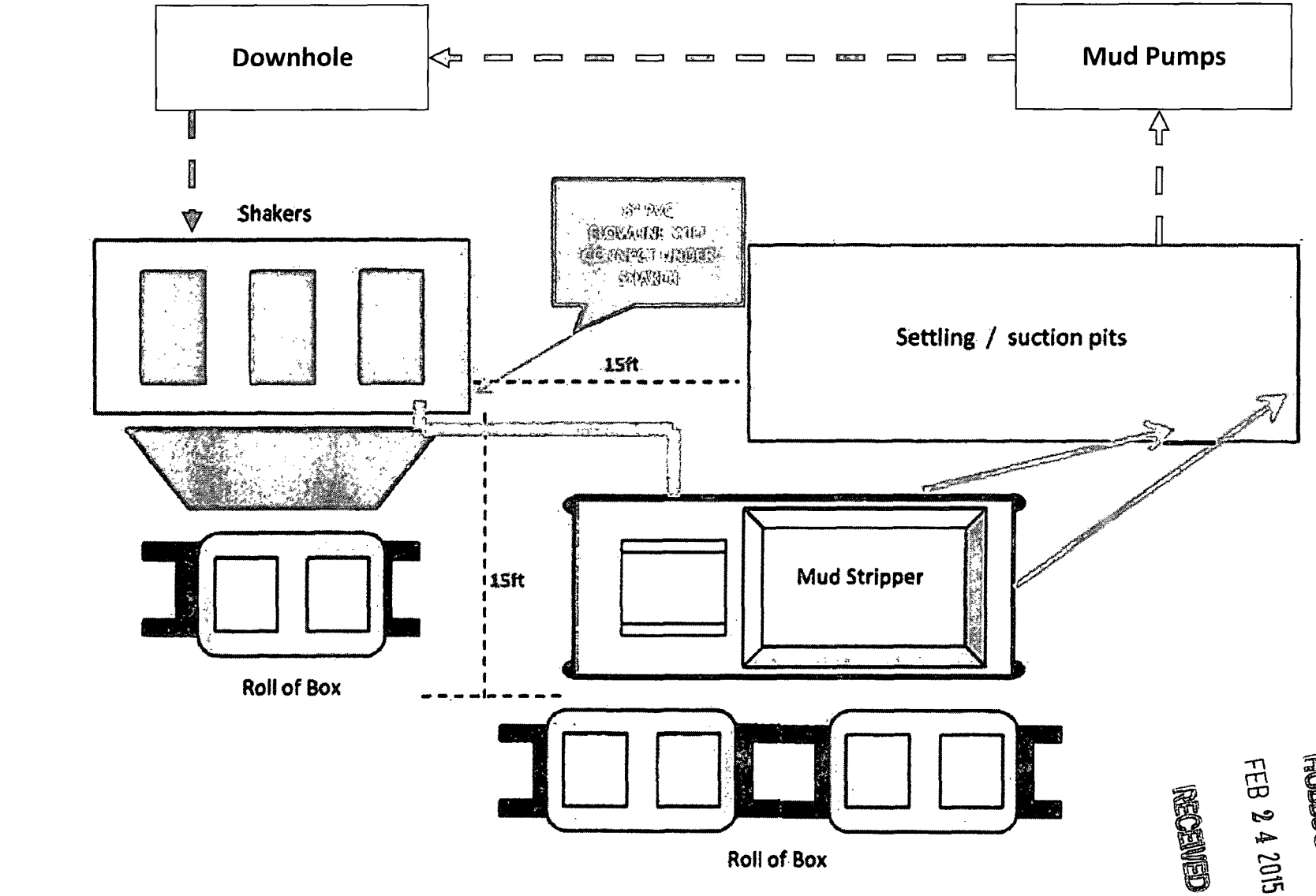
1) Was manufactured and inspected in accordance with NOV specifications and customer purchase order requirements.

2) Manufactured to:
   - ANSI/API Specification 16A, Third Edition, June 2004.
   - ISO 13533:2001, (Modified) Petroleum and Natural Gas Industries-Drilling and Production Equipment-Drill-Through Equipment.

3) Meets the applicable portions of NACE standard MR 0175/ISO 15156, First Edition for $H_2S$ service.

Certified By: Rita Moya

Rita Moya
Documentation Specialist




8" Flex Hose
20 ft long

H&P Flex 4 Closed Loop Schematic