District I
625 N. French Dr., Hobbs, NM 88240
District II
301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 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

HOBBS OCD
MAR 10 2015
RECEIVED

Form C-101
June 16, 2008

Submit to appropriate District Office

☐ 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. P.O. Box 4294, Houston, TX 77210-4294	157984 [3] API Number 30- 025- 42470

[4] Property Code	[5] Property Name	[6] Well No.
19520	North Hobbs G/SA Unit	956

[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
P	18	18-S	38-E		839	South	885	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
I	18	18-S	38-E		2546	South	885	East	Lea

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	3656.3'
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
No	4700' TVD/5150' MD	San Andres	H&P 340	July, 2015

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	1700	650	Surface
8-3/4	7	26	5150	860	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.

See Attached

E-PERMITTING - - New Well PM
Comp_____ P&A_____ TA_____
CSNG_____ Loc Chng_____
ReComp_____ Add New Well_____
Cancl Well_____ Create Pool_____

[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: 3/9/15
Phone: (713) 366-5158

OIL CONSERVATION DIVISION

Approved by:
Title: Petroleum Engineer
Approval Date: 03/11/15
Expiration Date: 03/11/17
Conditions of Approval Attached ☒ See Attached

Condition of Approval

MAR 13 2015

APD DATA – DRILLING PLAN

OPERATOR NAME / NUMBER: OXY USA WTP LP

LEASE NAME / NUMBER: **North Hobbs G/SA Unit #956**

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

SURFACE LOCATION: **839' FSL & 885' FEL, Sec 18, T18S, R38E**

SL: **Lat:** **32.7424103'N** **LONG:** **103.1816823'W**
X: **854109.26** **Y:** **635724.79** **New Mexico East NAD 1927**

BOTTOM HOLE LOCATION: **2546' FSL & 885' FEL, Sec 18, T18S, R38E**

BHL: **Lat:** **32.7471018'N** **LONG:** **103.1816876'W**
X: **854089.08** **Y:** **637431.68** **New Mexico East NAD 1927**

C-102 PLAT APPROX GR ELEV: 3656.3'

EST KB ELEV: 3672.8' (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	278	Fresh Water
Rustler	1593	Formation Fluid
Top of Salt	1713	Formation Fluid
Base of Salt	2753	Formation Fluid
Queen	3533	Formation Fluid
Grayburg	3868	Formation Fluid
Basal Grayburg	4048	Formation Fluid
San Andres	4148	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 5150' MD / 4700' TVD **OBJECTIVE**: San Andres

3. **CASING PROGRAM**

Surface Casing: 9.625" 36# J55 LTC casing set at ± 1700' MD/ 1650' TVD in a 12.25" hole filled with 9.5 ppg mud
Production Casing: 7" 26# J55 LTC casing set at ± 5150'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' – 1630')							
Lead: **0' – 1233'** 100% Excess	450	1233	Premium Plus Cement: 94 lbm/sk Premium Plus Cement 4 % Bentonite (Light Weight Additive) 1 % Calcium Chloride - Flake(Accelerator) 0.125 lbm/sk Poly-E-Flake (LC Additive)	9.11	13.5	1.73	824 psi
Tail: **1233' – 1630'** 100% Excess	200	397	Premium Plus Cement: 94 lbm/sk Premium Plus Cement, 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' - 5076')							
Stage 1 **Primary:** **4200'-5076'** 85% Excess	240	876	Poz Premium Plus Cement 50/50 Poz Premium Plus Cement 0.6 lbm/sk LAP-1 (LC Additive) 0.3 lbm/sk CFR-3 (Dispersant) 0.25 lbm/sk D-AIR 3000 (Defoamer) 0.125 lbm/sk Poly-E-Flake (LC Additive)	4.69	14.8	1.123	1181 psi
Stage 2 **Lead:** **0' – 1630'** 10 % Excess **1630' – 2981'** 200 % Excess	380	2981	Interfill C 0.125 lbm/sk Poly-E-Flake (LC.) 0.5 % Halad(R)-322 (LC Additive) 0.5 lbm/sk D-AIR 5000 (Defoamer)	13.4	11.9	2.394	249 psi
Stage 2 **Tail:** **2981'-4200'** 100 % Excess	240	1219	Premium Plus Cement 94 lbm/sk Premium Plus Cement 0.2 % WellLife 734 (Cement Enhancer) 5 lbm/sk Microbond (Expander) 0.3 % Econolite (Light Weight Additive) 0.3 % CFR-3 (Dispersant)	7.7	14.20	1.547	1186 psi

5. PRESSURE CONTROL EQUIPMENT

Surface: 0 – 1700' None.

Production: 1700' - 5150' 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/**1800**	250/**1800**	250/**1800**	250/**1800**

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 250/1800 psi for 10.

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 – 1700	8.8 – 9.5	32 – 40	< 25	<9.0	FW – Native Mud
1700 – 3600	9.8 – 10.0	28 – 32	N/C	10.0 – 11.0	Brine Water / Sweeps
3600 – 5150	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.

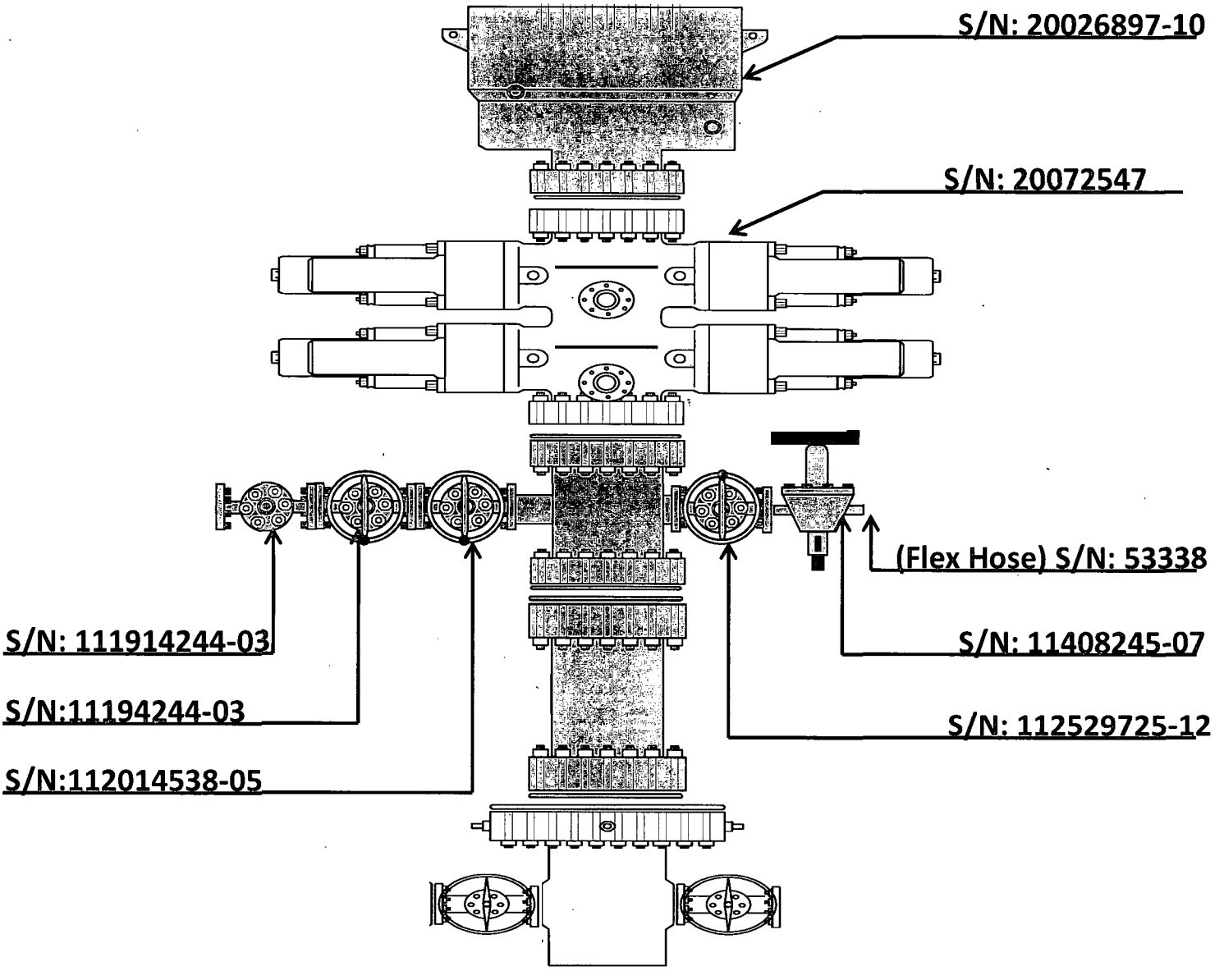
10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS

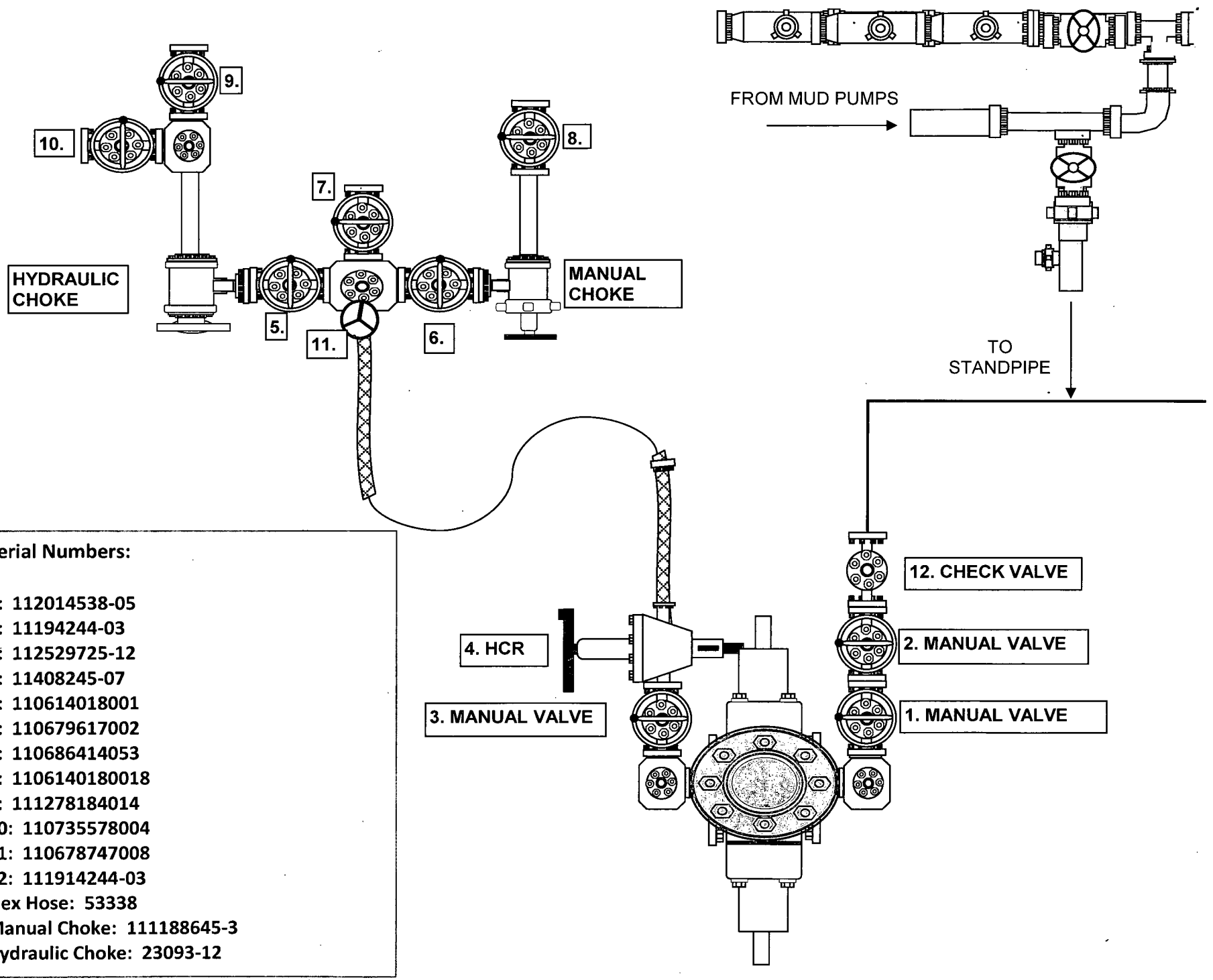
Road and location construction will begin after Oxy has submitted APD. Anticipated spud date will be as soon as possible after approval and as soon as a rig will be available. Move in operations and drilling is expected to take 10 days. If production casing is run, then an additional 30 days will be 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

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:

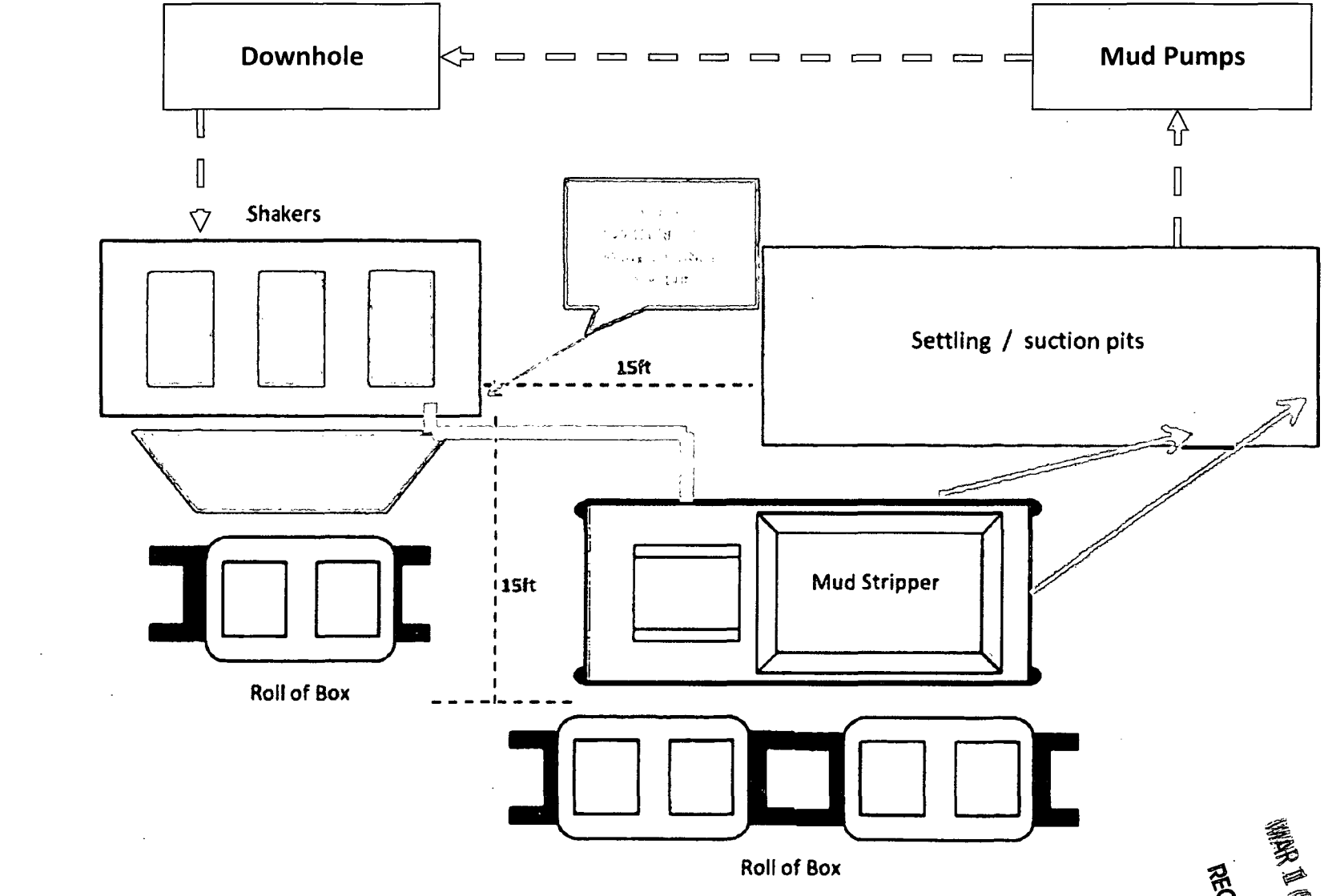
1) Was manufactured and inspected in accordance with NOV specifications and customer purchase order requirements.

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



H&P Flex 4 Closed Loop Schematic

CONDITIONS OF APPROVAL

API #	Operator	Well name & Number
30-025-42470	Occidental Permian LTD	North Hobbs G/SA Unit # 956

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