11-872

OCD-ARTESIA

Form 3160-3
(April 2004)

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007 12-EA-09

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. **NM-02860**

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. **ND 19 Federal SWD #1** [38943]

2. Name of Operator **BOPCO, L. P.** (260737)

9. API Well No. 30-015-39713

3a. Address **P. O. Box 2760, Midland, TX 79702**

3b. Phone No. *(include area code)* **432-683-2277**

10. Field and Pool, or Exploratory **Devonian Wildcat** [97864]

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **NENE, UL A, 516' FNL, 705' FEL, Lat N32.208789, Long W103.913969**
At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area **Sec 19, T24S, R30E, Mer NMP**

14. Distance in miles and direction from nearest town or post office* **9 miles east of Malaga, NM**

12. County or Parish **Eddy County**

13. State **NM**

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) **4764'**	16. No. of acres in lease **2520.68**	17. Spacing Unit dedicated to this well **0**
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. **145.4'**	19. Proposed Depth **16,800' TVD**	20. BLM/BIA Bond No. on file **COB000050**
21. Elevations (Show whether DF, KDB, RT, GL, etc.) **3184' GL**	22. Approximate date work will start* **09/01/2011**	23. Estimated duration **110 days**

24. Attachments

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
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 authorized officer.

25. Signature [signature] Name *(Printed/Typed)* **Katy Holster** Date 8/2/11

Title **Administrative Assistant**

Approved by *(Signature)* /s/ Wesley W. Ingram Name *(Printed/Typed)* Date **NOV 8 2011**

Title for FIELD MANAGER Office **CARLSBAD FIELD OFFICE**

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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.

*(Instructions on page 2)

Carlsbad Controlled Water Basin

RECEIVED
NOV - 9 2011
NMOCD ARTESIA

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

SUBJECT TO LIKE APPROVAL BY STATE

BOPCO, L.P.

P. O. Box 2760
Midland, Texas 79702

432-683-2277 FAX-432-687-0329

July 20, 2011

Bureau of Land Management
Carlsbad Field Office
620 East Green Street
Carlsbad, New Mexico 88220-6292

Attn: Mr. Don Peterson – Assistant Field Manager, Minerals

RE: APPLICATION FOR PERMIT TO DRILL
ND 19 FEDERAL SWD #1
516' FNL, 705' FEL, SEC. 19, T24S, R30E, EDDY COUNTY, NM

Dear Mr. Peterson,

In reference to the above captioned well, I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in the attached eight point drilling plan and multi-use surface plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by BOPCO, L.P. and it's contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

If you have any questions regarding the accuracy of the plan provided herein, please do not hesitate to contact me at (432) 683-2277.

Sincerely,

Stephen M. Martinez
Division Drilling Superintendent

WRD/mac

20" surface casing is to be set into the Rustler below all fresh water sands at an approximate depth of 750'.

13-3/8" intermediate casing will be set at 3485'.

9-5/8" OD casing will be set at approximately 11,000' MD and cemented in two stages with DV Tool set at approximately 5500'. Cement will be circulated 500' into the 13-3/8" casing shoe.

7-5/8" production liner will be run to approximately 13,575' into the top of the Devonian. Cement will be circulated 300' into the 9-5/8" intermediate casing. (Also top of liner) An open hole completion in the Devonian is anticipated.

Drilling procedure, BOP diagram, and anticipated tops are attached.

This well is located outside the R111 Potash area and outside the Secretary's Potash area.

Both the surface location and bottom hole location are orthodox.

BOPCO, L.P., at P. O. Box 2760, Midland, TX, 79702 is a subsidiary of BOPCO, L.P., 201 Mail Street, Ft. Worth, TX, 76102. Bond No. COB000050 (Nationwide).

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 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 and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised July 16, 2010

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-39713	97864	Wildcat (Devonian)

Property Code	Property Name	Well Number
38943	ND "19" FEDERAL SWD	1

OGRID No.	Operator Name	Elevation
260737	BOPCO, L.P.	3184'

Surface Location

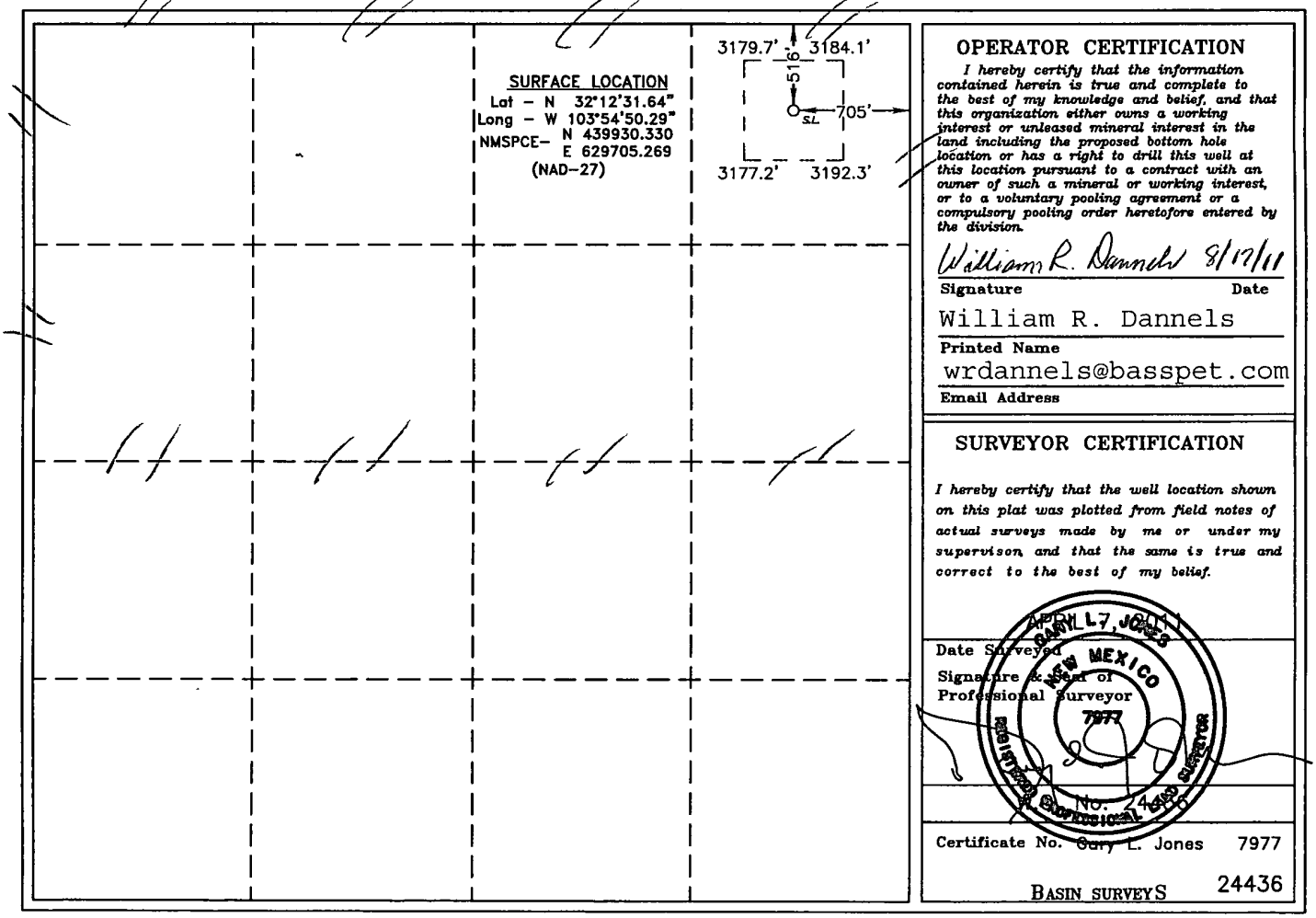
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	19	24 S	30 E		516	NORTH	705	EAST	EDDY

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

William R. Dannels 8/17/11
Signature Date

William R. Dannels
Printed Name

wrdannels@basspet.com
Email Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

APRIL 7, 2011
Date Surveyed

Signature & Seal of Professional Surveyor

NEW MEXICO — REGISTERED PROFESSIONAL SURVEYOR — 7977 — GARY L. JONES

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 24436

EIGHT POINT DRILLING PROGRAM
BOPCO, L.P.

NAME OF WELL: ND 19 Federal SWD #1
LEGAL DESCRIPTION - SURFACE: 516' FNL, 705' FEL, Section 19, T24S, R30E, Eddy County, NM.

POINT 1: ESTIMATED FORMATION TOPS
(See No. 2 Below)

POINT 2: WATER, OIL, GAS AND/OR MINERAL BEARING FORMATIONS

Anticipated Formation Tops: KB 3209' (estimated)
GL 3184'

FORMATION/MARKER	ESTIMATED TOPS FROM KB (FT) TVD	EST SUBSEA TOP (FT)	BEARING
T/Fresh Water	245	2,964	Fresh Water
T/Salt	755	2,454	Barren
T/Lamar Lime	3,471	-262	Barren
T/Delaware Sands	3,504	-295	Oil/Gas
T/Bone Spring	7,284	-4,075	Oil/Gas
T/Wolfcamp	10,539	-7,330	Oil/Gas
T/Mid Wolfcamp	11,774	-8,565	Oil/Gas
T/Strawn	12,634	-9,445	Oil/Gas
T/Atoka	12,734	-9,525	Oil/Gas
T/Morrow	13,434	-10,225	Oil/Gas
T/Mid Morrow	13,934	-10,725	Oil/Gas
T/Lwr Morrow	14,364	-11,155	Oil/Gas
T/Miss Lime	15,049	-11,840	Oil/Gas
T/Woodford	15,459	-12,250	Oil/Gas
T/Devonian	15,574	-12,365	Brine Water
PTD	16,800	-13,591	

POINT 3: CASING PROGRAM

TYPE	INTERVALS (MD)	HOLE SIZE	PURPOSE	CONDITION
30", 157.68#, X52, PE	0'-80'	36"	Conductor	Unspecified
20", 94#, J-55, BTC	0'-750'	26"	Surface	New
13-3/8", 68#, HCK55, BTC	0'-3,485'	17-1/2"	Intermediate	New
9-5/8", 53.50#, L-80, LT&C	0'-11,000'	12-1/4"	Prot/Production	New
7-5/8", 39#, HCL-80, FJ	10,700'-15,575'	8-1/2"	Production Liner	New
NONE	15,575'-16,800'	6-1/2"	Open Hole	

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
30", 157.68#, X52, PE	238.8	3.30	19.0
20", 94#, J-55, BTC	14.62	1.36	2.87
13-3/8", 68#, HCK55, BTC	7.52	1.50	1.07
9-5/8", 53.50#, L-80, LT&C	2.10	1.16	1.32
7-5/8", 39#, HCL-80, FJ	5.82	1.14	1.46

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

SURFACE CASING - (20")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.8 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.51 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.3 design factor with a surface pressure equal to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure a that depth. Backup pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized.

PROTECTIVE CASING - (13-3/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (10.5 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.55 psi/ft). The effects of axial load on collapse will be considered.

In the case of development drilling, collapse design should be analyzed using internal evacuation equal to 1/3 the proposed total depth of the well. This criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.

Burst — A 1.0 surface design factor and a 1.3 downhole design factor with a surface pressure equivalent to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Back pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient.

2ND PROT./PROD CASING - (9-5/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (10.0 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.25 design factor with anticipated maximum tubing pressure (6000 psig) on top of the maximum anticipated packer fluid gradient. (9.5 ppg or 0.49 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

PRODUCTION LINER - (7-5/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (11.5 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.60 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.25 design factor with anticipated maximum tubing pressure (6000 psig) on top of the maximum anticipated packer fluid gradient. (0.49 psi/ft) Backup on production strings will be formation pore pressure. (0.60 psi/ft) The effects of tension on burst will not be utilized.

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)

The BOPE when rigged up on the 20" surface casing head (17-1/2" open hole) will consist of 20" hydril and diverter system per Diagram 1 (2,000 psi WP). When installed on the surface casing head, the BOPE will be hydro-tested to 250-300 psig and 1,600 psig by an independent tester. The hydril when installed on surface casing will be tested to 1,000 psi.

The BOPE when rigged up on the 13-3/8" intermediate casing spool (12-1/4" open hole) will consist of 13-5/8" x 5,000 psi annular, 13-5/8" x 5,000 psi pipe and blind rams with mud cross; choke manifold and chokes as in Diagram 2. The pipe and blind rams, choke, kill lines, kelly cocks, inside BOP, etc will be tested to ~~2,400~~ psig (~~70% burst of 13-3/8~~") by an independent tester. In addition to the high pressure test, a low pressure test (250-300 psig) test will be required. Hydril will be tested to ~~2,400~~ 2500 psig. See COA

The BOPE when rigged up on the 9-5/8" intermediate casing spool (8-1/2" open hole) will consist of 11" x 10,000 psi annular, (2) 11" x 10,000 psi pipe and blind rams with mud cross, choke manifold and chokes as in Diagram 3. The pipe and blind rams, choke, kill lines, kelly cocks, inside BOP, etc will be tested to ~~5,000~~ psig (~~70% of burst on 9-5/8" casing~~) by an independent tester. In addition to the high pressure test, a low pressure test (250-300 psig) test will be required. Hydril will be tested to ~~3,500~~ 5,000 psig.

These tests will be performed:

a) Upon installation
b) After any component changes
c) Thirty days after a previous test
d) As required by well conditions

A function test to insure that the preventers are operating correctly will be performed on each trip.

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 750'	FW Spud Mud	8.5 – 9.2	38-70	NC	NC	NC	10
750' - 3485'	Brine Water	9.8 – 10.2	28-30	NC	NC	NC	9.5 – 10.5
3485' – 11,000'	FW/Gel	8.7 – 9.5	28-36	NC	NC	NC	9.5 – 10.0
11,000' - 15,575	FW/XCD/Starch	9.5 – 11.5	36-45	10	10	<10'	9.5 – 10.0
15,575' - 16,~~275~~ 900	Brine Water	9.8 – 10.2	28-30	NC	NC	NC	10.0 – 11.0

NOTE: May increase vis for logging purposes only.

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING

None anticipated.

B) LOGGING

Run #1@ 11,000': GR/CNL/LDT – Restively-Sonic with GR/CNL to surface at 15,575'.

Run #2 @ 15,575': GR/CNL/LDT – Restively-Sonic.

Run #3 @ 16,275': GR/CNL/LDT – Restively-Sonic.

Mud Logger: RU mud logger at 100' to pick T/salt and 2500' to TD.

POINT 6: TECHNICAL STAGES OF OPERATION – cont'd

C) CONVENTIONAL CORING

None anticipated.

D) CEMENT

	INTERVAL	SKS	FILL	TYPE	GAL/SK	PPG	FT^3/SK
SURFACE: Cement to surface.							
LEAD:	0' – 450'	825	450	HalCem-C + 4% Bentonite	8.63	13.7	1.66
EXCESS:	100%						
TAIL:	450' – 750'	750	300	HalCem-C + 1% $CaCl_2$	6.36	14.8	1.34
EXCESS:	100%						
INTERMEDIATE: Cement to surface.							
LEAD:	0' – 2985'	2150	2985	Econo-Cem-HCC +	9.65	12.9	1.81
EXCESS:	100%			3% Salt			
TAIL:	2985' - 3485'	575	500	Halcem-C + 0.4% Halad-9	6.31	14.8	1.33
EXCESS:	100%						
PROT/PRODUCTION: Cement to surface.							
Stage 1:							
LEAD #1:	5500' - 6500'	150	1000	Tuned Light + 0.15#/sx Salt	14.50	9.7	3.13
EXCESS:	50%						
LEAD #2:	6500' – 10,000'	875	3500	Econo-Cem-HCC + 2%	10.78	12.5	1.95
EXCESS:	50%			HR-800			
TAIL:	10,000' – 11,000'	450	1000	HalCem-H + 0.6% Halad-9	5.05	15.85	1.15
EXCESS:	50%			+ 0.2% HR-800			
DV Tool @ 5,500'							
Stage 2:							
LEAD:	0' – 5000'	5000	5500	Tuned Light + 0.15#/sx Salt	14.50	9.7	3.13
EXCESS:	50%						
TAIL:	5000'-5500'	100	500	Econo-Cem-HCC + 2%	5.05	15.85	1.15
EXCESS:	50%			HR-800			
PROD LINER:	10,700' – 15,575'	525	4875	HalCem-H + 0.6% Halad-9	5.05	15.85	1.15
EXCESS:	50%			+ 0.2% HR-800			

E) DIRECTIONAL DRILLING

BOPCO, L. P. plans to drill a straight hole to PTD.

F) H_2S Safety Equipment

As stated in the BLM Onshore Order 6, for wells located in the SOPA, H_2S equipment will be rigged up after setting surface casing. For the wells located inside the SOPA the flare pit or ½ steel pits will be located 150' from the location. For wells located outside the SOPA the flare pit or ½ steel pit will be located 100' away from the location. **(See page 6 of Survey plat package)** There is not any H_2S anticipated in the area, although in the event that H_2S is encountered, the H_2S contingency plan attached will be implemented.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. Lost circulation may exist in the Delaware Section from 3504'-7284' TVD. Once in the Bone Spring pore pressures will gradually increase to the top of the Wolfcamp. 9-5/8" casing will be set in the Wolfcamp and pore pressures will again increase through the Strawn and Atoka sections. A 7-5/8" production liner will be set into the Devonian with mud weights at 11.5 ppg or less. The Devonian BHP is 5000 psi and can be drilled with 10.0 ppg brine water. Maximum surface pressures in the Devonian if productive could be 4500 psi with 7500 ppm H_2S and 5% CO_2; however, we anticipate drilling down dip in a non-productive area. There is no Devonian production within +/- 10 miles.

POINT 8: OTHER PERTINENT INFORMATION

A) Auxiliary Equipment

Upper and lower kelly cocks. Full opening stab in valve on the rig floor.

B) Anticipated Starting Date

Upon approval

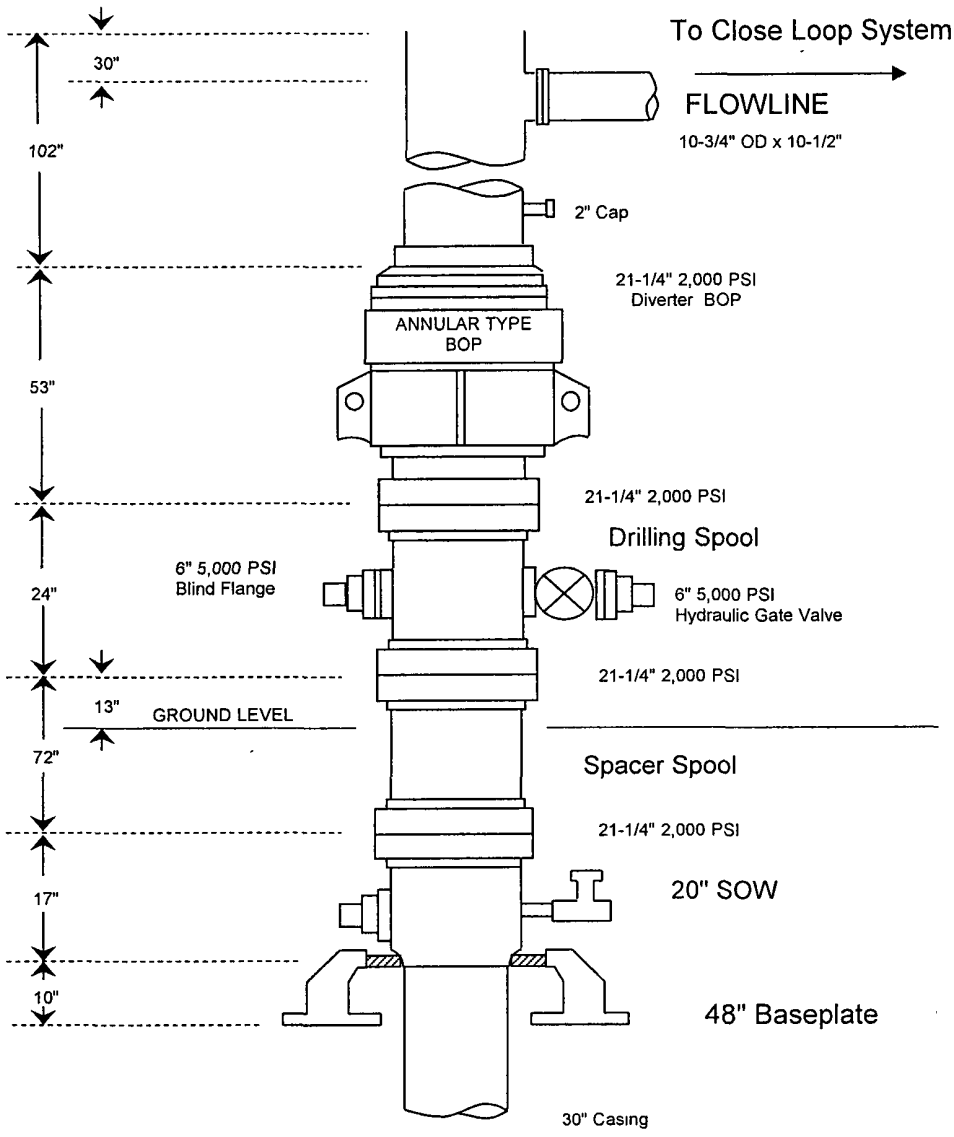
103 days drilling operations

7 days completion operations

WRD/mac

BOPCO, L. P

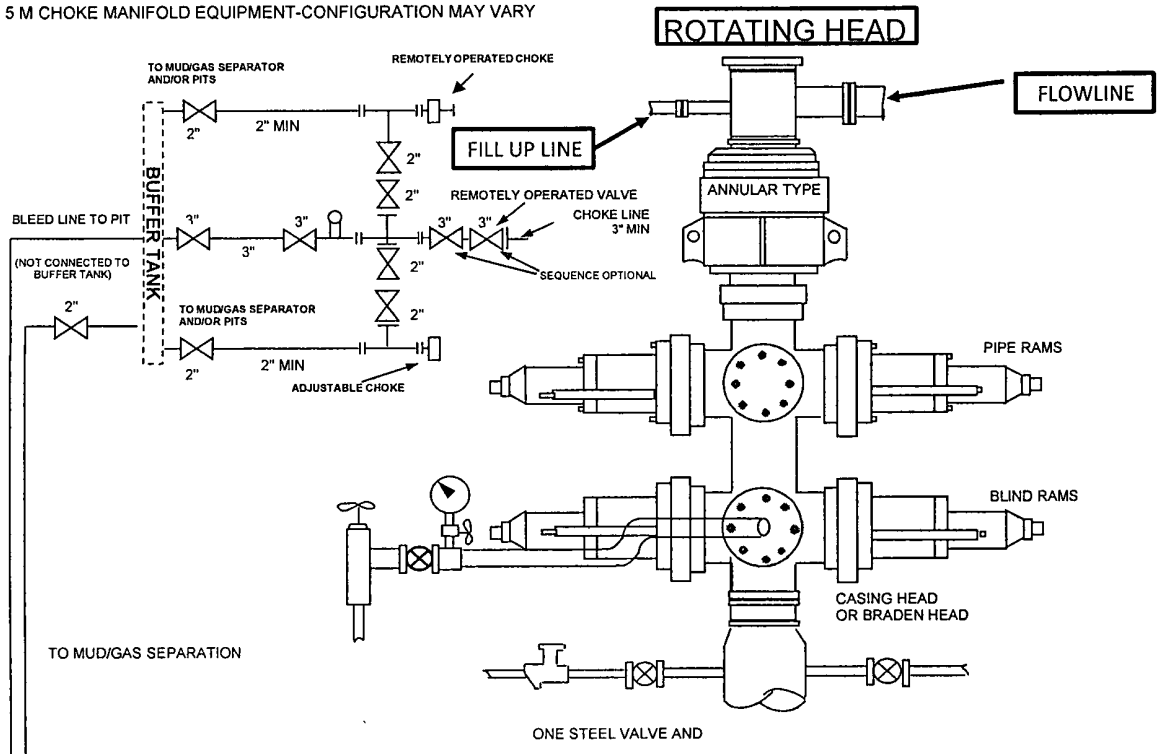
20" 2,000 PSI Diverter



Note: Actual lengths of casing heads may vary. Always measure items prior to installing in order to ensure proper spacing.

DIAGRAM 1

BOPCO, L. P.
13 5/8" X 5-M WP BOPE WITH 5-M WP ANNULAR



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

A. One double gate Blowout preventer with lower pipe rams and upper blind rams, all hydraulically controlled.
B. Opening on preventers between rams to be flanged, studded or clamped and at least two inches in diameter.
C. All connections from operating manifold to preventers to be all steel hose or tube a mininum of one inch in diameter.
D. The available closing pressure shall be at least 15% in excess of that required with suffficient volume to operate (close, open, and re-close) the preventers.
E. All connections to and from preventers to have a pressure rating equivalent to that of the BOPs.
F. Manual controls to be installed before drilling cement plug.
G. Valve to control flow through drill pipe to be located on rig floor.
H. Chokes must be adjustable. Choke spool may be used between rams.

DIAGRAM 2

BOPCO, L. P.

10-M WP BOPE WITH 10-M WP ANNULAR

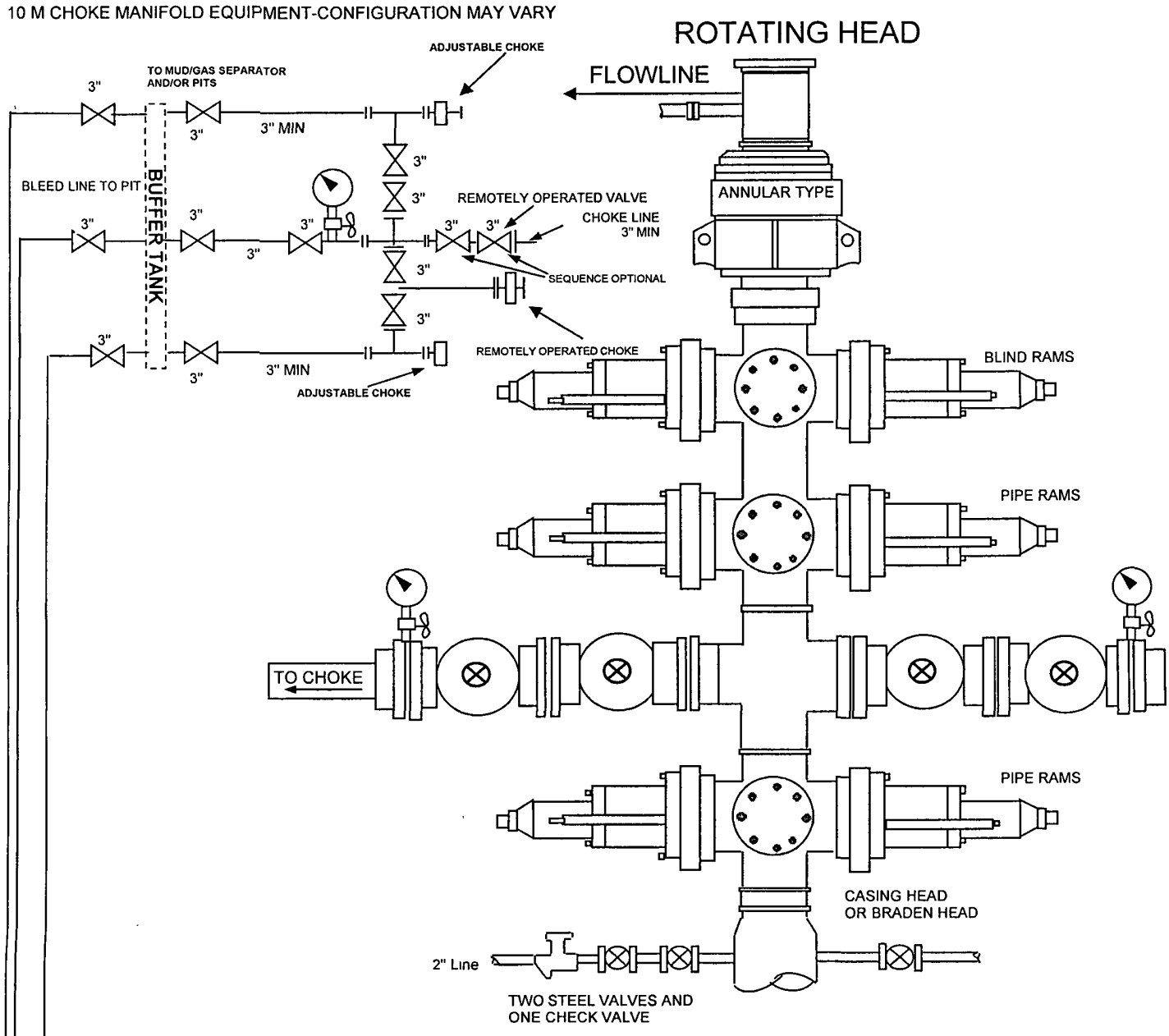


DIAGRAM 3

BOPCO, L. P.

10-M WP BOPE WITH 10-M WP ANNULAR

THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

A. Opening between the ram to be flanged, studded, or clamped.
B. All connections from operating manifolds to preventers to be all steel hose or tube a mininum of one inch in diameter.
C. The available closing pressure shall be at least 15% in excess of that required with suffficient volume to operate (close, open, and re-close) the preventers.
D. All connections to and from preventer to have a pressure rating equivalent to that of the BOPs.
E. Manual controls to be installed before drilling cement plug.
F. Kelly cock to be installed on kelly.
G. Inside blowout preventer to be available on rig floor.
H. Dual operating controls: one located by drillers position and the other located a safe distance from the rig floor.
I. All chokes will be adjustable.

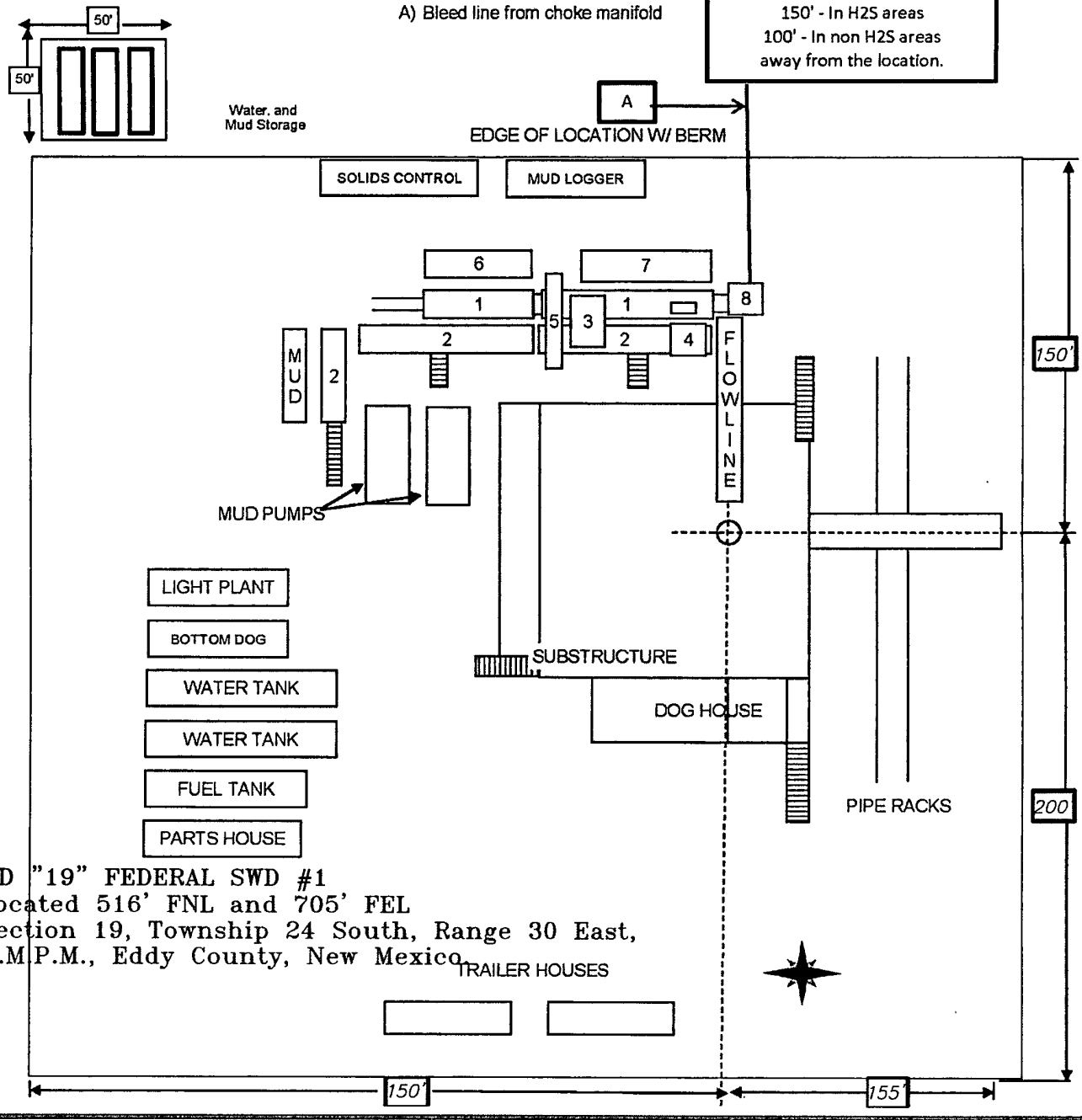
RIG LAYOUT

RIG LAYOUT SCHEMATIC
INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

Solids Control Equipment Legend

1) Roll Off Bin
2) Steel Tank
3) Mud Cleaner
4) Shaker
5) Centrifuge
6) Dewatering Unit
7) Catch Tank
8) Choke Manifold
A) Bleed line from choke manifold

Flare Pit or 1/2 Steel Pit will be located at
150' - In H2S areas
100' - In non H2S areas
away from the location.



ND "19" FEDERAL SWD #1
Located 516' FNL and 705' FEL
Section 19, Township 24 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico

basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JMS 24436
Survey Date: 04-07-2011
Scale: 1" = 2000'
Date: 04-12-2011

N

BOPCO, L.P.

HYDROGEN SULFIDE (H_2S) CONTINGENCY PLAN

Assumed 100 ppm ROE = 3000'

100 ppm H_2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- **Isolate the area and prevent entry by other persons into the 100 ppm ROE.**
- **Evacuate any public places encompassed by the 100 ppm ROE.**
- **Be equipped with H_2S monitors and air packs in order to control the release.**
- **Use the "buddy system" to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
  - **Detection of H_2S, and**
  - **Measures for protection against the gas,**
  - **Equipment used for protection and emergency response.**

Ignition of Gas source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

BOPCO L.P. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. (Operator Name)'s response must be in coordination with the State of New México's "Hazardous Materials Emergency Response Plan" (HMER).

H_2S CONTINGENCY PLAN EMERGENCY CONTACTS

BOPCO L.P. Midland Office 432-683-2277

Key Personnel

Name	Title	Cell Phone Number
Stephen Martinez	Drilling Supt.	432-556-0262
Buddy Jenkins	Assistant Supt.	432-238-3295
Bill Dannels	Engineer	432-638-9463
Brian Hammit	Engineer	432-638-9460
Charles Warne	Engineer	432-894-1392

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
24 Hour	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635
National Emergency Response Center (Washington, DC)	800-424-8802

Other

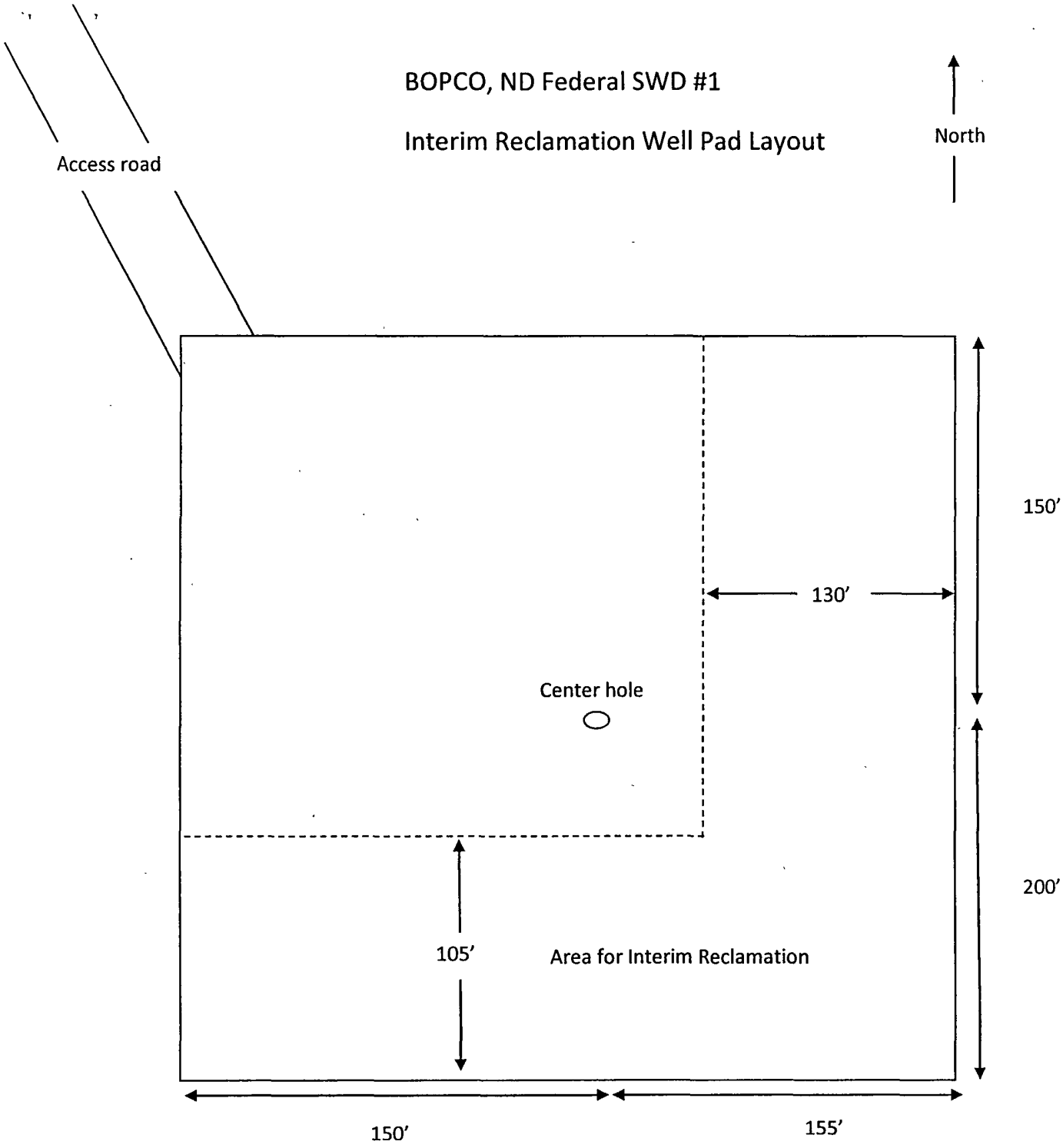
Boots & Coots IWC	800-256-9688 or 281-931-8884
Cudd PressureControl	432-580-3544 or 432-570-5300
Halliburton	575-746-2757
B. J. Services	575-746-3569
Flight For Life – 4000 24th St. Lubbock, Texas	806-743-9911
Aerocare – R3, Box 49F, Lubbock, Texas	806-747-8923
Med Flight Air Amb – 2301 Yale Blvd SE #D3, Albuq., NM	505-842-4433
S B Air Med Service – 2505 Clark Carr Loop SE, Albuq., NM	505-842-4949

ND "19" Federal SWD #1 Location On-site Notes

The location onsite was conducted on 05/05/2011 by Cecil Watkins - BOPCO L.P., Randy Rust - BLM, and Robert Gomez – Basin Surveys. The location was evaluated and approved as is with a footage call of 516' FNL & 705' FWL of Sec 19, T24S-R30E. Will need to contact and check with Ranch lease prior to location construction.

BOPCO, ND Federal SWD #1

Interim Reclamation Well Pad Layout



MULTI-POINT SURFACE USE PLAN

NAME OF WELL: ND 19 Federal SWD #1

LEGAL DESCRIPTION - SURFACE: 516' FNL, 705' FEL, Section 19, T24S, R30E, Eddy County, NM.

POINT 1: EXISTING ROADS

A) Proposed Well Site Location:

B) Existing Roads:

From the junction of Galivan and McDonald, go easterly turning northerly 1.4 miles to lease road. On lease road go west 0.1 miles to proposed lease road.

B) Existing Road Maintenance or Improvement Plan:

POINT 2: NEW PLANNED ACCESS ROUTE

A) Route Location:

Approximately 20' of new lease road will be built.

B) Width

14' wide

C) Maximum Grade

Grade to match existing topography or as per BLM requirements.

D) Turnout Ditches

As required by BLM stipulations

E) Culverts, Cattle Guards, and Surfacing Equipment

If required, culverts and cattle guards will be set per BLM Specs.

POINT 3: LOCATION OF EXISTING WELLS

POINT 4: LOCATION OF EXISTING OR PROPOSED FACILITIES

A) Existing production facilities operated by BOPCO, L.P. are located within 1300' of the ND 19 Federal SWD #1 at Poker Lake Unit #213.

B) New Facilities in the Event of Production:

A new injection pump will be added to the existing facilities at Poker Lake Unit #213 water station. A 4-1/2" steel injection line will be buried from the water station to the well. Produced water will be transferred to PLU #213 water station via buried poly lines. Truck water hauling will only occur in the event of any unforeseen issues with the water transfer system. A diagram of the PLU 213 water station is attached.

C) Rehabilitation of Disturbed Areas Unnecessary for Production:

Following the construction, those access areas required for continued production will be graded to provide drainage and minimize erosion. The areas unnecessary for use will be graded to blend in with the surrounding topography (see Point 10)

POINT 5: LOCATION AND TYPE OF WATER SUPPLY

A) Location and Type of Water Supply

Fresh water will be hauled from Johnson Station 50 miles east of Carlsbad, New Mexico or other commercial facilities. Brine water will be hauled from commercial facilities.

B) Water Transportation System

Water hauling to the location will be over the existing and proposed roads.

POINT 6: SOURCE OF CONSTRUCTION MATERIALS

A) Materials

On-site caliche will be used. If this is not sufficient, caliche will be hauled from a BLM approved pit.

B) Land Ownership

Federally Owned

C) Materials Foreign to the Site

No construction materials foreign to this area are anticipated for this drill site.

D) Access Roads

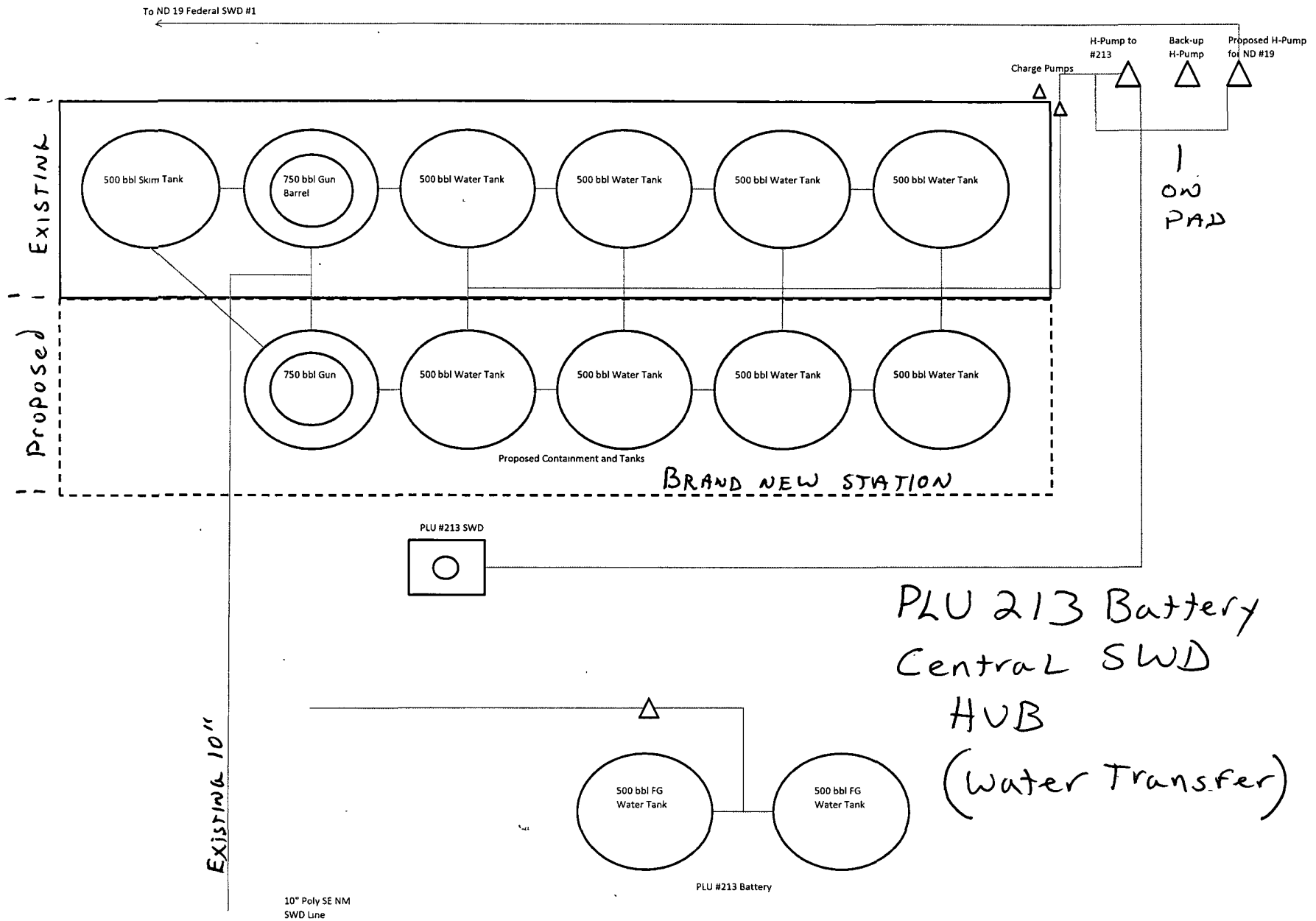
POINT 7: METHODS FOR HANDLING WASTE MATERIAL

A) Cuttings

Cuttings will be contained in the roll off bins and disposed of a CRI.

B) Drilling Fluids

Drilling fluids will be contained in the steel pits, frac tanks and disposed at licensed disposal sites.


To ND 19 Federal SWD #1
H-Pump to #213
Back-up H-Pump
Proposed H-Pump for ND #19
Charge Pumps
EXISTING
500 bbl Skim Tank
750 bbl Gun Barrel
500 bbl Water Tank
500 bbl Water Tank
500 bbl Water Tank
500 bbl Water Tank
1 ON PAD
PROPOSED
750 bbl Gun
500 bbl Water Tank
500 bbl Water Tank
500 bbl Water Tank
500 bbl Water Tank
Proposed Containment and Tanks
BRAND NEW STATION
PLU #213 SWD
PLU 213 Battery
Central SWD
HUB
(Water Transfer)
EXISTING 10"
500 bbl FG Water Tank
500 bbl FG Water Tank
PLU #213 Battery
10" Poly SE NM SWD Line
2

C) Produced Fluids

Water production will be contained in the steel pits.

Although no hydrocarbon fluids are expected to be produced, any hydrocarbon fluid or other fluids that may be produced during testing will be retained in test tanks.

D) Sewage

Current laws and regulations pertaining to the disposal of human waste will be complied with.

E) Garbage

Portable containers will be utilized for garbage disposal during the drilling of this well.

F) Cleanup of Well Site

Upon release of the drilling rig, the surface of the drilling pad will be graded to accommodate a completion rig if electric log analysis indicate potential productive zones. Reasonable cleanup will be performed prior to the final restoration of the site.

POINT 8: ANCILLARY FACILITIES

None required.

POINT 9: WELL SITE LAYOUT

A) Rig Orientation and Layout

Dimensions of the well pad, closed loop system, and the location of major rig components are enclosed. Only minor leveling of the well site will be required. No significant cuts or fills will be necessary.

B) Locations of Access Road

C) Lining of the Pits

No reserve pits - closed loop system.

POINT 10: PLANS FOR RESTORATION OF THE SURFACE

A) Reserve Pit Cleanup - Not applicable. Closed loop drilling fluid system will be used

The pits will be fenced immediately after construction and shall be maintained until they are backfilled. Previous to backfill operations, any hydrocarbon material on the pits' surfaces shall be removed. The fluids and solids contained in the pits shall be backfilled with soil excavated from the site and soil adjacent to the reserve pits. The restored surface of the pits shall be contoured to prevent impoundment of surface water flow. Water-bars will be constructed as needed to prevent excessive erosion. Topsoil, as available, shall be placed over the restored surface in a uniform layer. The area will be seeded according to the Bureau of Land Management stipulations during the appropriate season following restoration.

B) Restoration Plans - Production Developed

Those areas not required for production will be graded to blend with the surrounding topography. Topsoil, as available, will be placed upon those areas and seeded. The portion of the site required for production will be graded to minimize erosion and provide access during inclement conditions. Following depletion and abandonment of the site, restoration procedures will be those that follow under Item C.

C) Restoration Plans - No Production Developed

With no production developed, the entire surface disturbed by construction of the well site will be restored. The site will be contoured to blend with the surrounding topography and provide drainage of surface water. The topsoil, as available, shall be replaced in a uniform layer and seeded according to the Bureau of Land Management's stipulations.

D) Rehabilitation's Timetable

Upon completion of drilling operations, the initial cleanup of the site will be performed as soon as weather and site conditions allow economic execution of the work.

POINT 11: OTHER INFORMATION

A) Terrain

Slightly rolling hills.

B) Soil

Caliche and sand.

C) Vegetation

Sparse, primarily grasses and mesquite with very little grass.

D) Surface Use

Primarily grazing.

E) Surface Water

There are no ponds, lakes, streams or rivers within several miles of the wellsite.

F) Water Wells

There is one existing water well within 1-1/2 miles of proposed location. This well is located in Section 19, T24S, R30E.

G) Residences and Buildings

None in the immediate vicinity.

H) Historical Sites

None observed.

I) Archeological Resources

No independent archeological survey has been done. This well location is located in the area covered by Memorandum of Agreement – Permian Basin. A Payment of $1420.00 fee for this project is included in this application. Any location or construction conflicts will be resolved before construction begins.

J) Surface Ownership

The well site is on federally owned land. There will be no new access roads required for this location.

K) Well signs will be posted at the drilling site.

L) Open Pits

No open pits will be used for drilling or production. Any open top tanks will be netted.

POINT 12: OPERATOR'S FIELD REPRESENTATIVE

(Field personnel responsible for compliance with development plan for surface use).

DRILLING
William R. Dannels
Box 2760
Midland, Texas 79702
(432) 683-2277

PRODUCTION
Dean Clemmer
3104 East Green Street
Carlsbad, New Mexico 88220
(575) 887-7329

Carlos Cruz
Box 2760
Midland, Texas 79702
(432) 683-2277

WRD/mac

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO, L.P.
LEASE NO.:	NMNM02860
WELL NAME & NO.:	ND 19 Federal SWD #1
SURFACE HOLE FOOTAGE:	516' FNL & 705' FEL
BOTTOM HOLE FOOTAGE	516' FNL & 705' FEL
LOCATION:	Section 19, T. 24 S., R. 30 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.