Owl SWD Operating, LLC
Brininstool Ranch SWD Well No.3
Section 19, Twp 23-S, Rng 33-E
Lea County, New Mexico

Well Program - New Drill

Objective: Drill new well for commercial salt water disposal into the Devonian, Silurian and Ordovician formations. (Note: Ordovician might only be accessed for logging rathole, mudlogging and e-logging to determine final depths.)

1. **Geologic Information** - Devonian / Silurian Formations

This area of the Devonian consists of dolomites with some cherty dolomites characterized by intercrystalline and vugular porosity. Additional porosity can be found when the well bore encounters detrital carbonates interspersed throughout.

Estimated Formation Tops:

B/Fresh Water	400
T/Rustler	1283
T/Salado	1363
Delaware Sand	5142
Bone Spring	8778
Wolfcamp	12258
Strawn	14096
Atoka	14273
Morrow	15043
Middle Morrow	15393
Lower Morrow	15561
Woodford	15750
Devonian	16000
Silurian	17800
TD (Ordovician)	*18000

*Please see narrative portion of drilling/pipe specs for TD options.

2. **Drilling Procedure**

a. MIRU drilling rig and associated equipment. Set up H_2S wind direction indicators; brief all personnel on Emergency Evacuation Routes.
b. All contractors conduct safety meeting prior to current task. All equipment inspected daily. Repair / replace as required.
c. Well spud operations commence.
d. Mud logger monitoring returns; cuttings & waste hauled to specified facility. (Sundance, Lea County)
e. After surface casing set/drilled; if H_2S levels >20ppm detected, implement H_2S Plan accordingly. (e.g., cease operations, shut in well, employ H_2S safety trailer & personnel safety devices, install flare line, etc. - refer to plan.)
f. Spills contained & cleaned up immediately. Repair or otherwise correct the situation within 48 hours before resuming operations. Notify OCD within 24 hours. Remediation started ASAP if required. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate.

Well Program - New Drill (cont.)

g. Sundry forms filed as needed - casing, cement, etc. - operations continue to completion.

3. **Casing program** - Casing designed as follows:

STRING	HOLE SZ	DEPTH	CSG SZ	COND	WT/GRD	CLLPS/BRS	TNSN
Surface	24.0"	0-1,300'	20.0"	New	106.5 lb. J/K-55	1.125/1.1	1.8
Intermediate	17.5"	0-5,150'	13.375"	New	68 lb. HPC-110	1.125/1.1	1.8
2nd Inter	12.25"	0-12,000'	9.875"	New	62.8 lb. P-110	1.125/1.1	1.8
Prod/ Liner*	8.5"	11,800'-16,400'	7.0"	New	32.0 lb. L-80 BT&C	1.125/1.1	1.8
Openhole*	5.875" hole	16,400'-17,550'	OH	n/a	n/a	n/a	n/a

Notes:

- ✓ On both Intermediate casing strings, the cement will be designed to circulate to surface. Both strings will have cement bond logs run (radial, CET or equivalent) to surface.
- ✓ While running all casing strings, the pipe will be kept a minimum of 1/3 full at all times to avoid approaching the collapse pressure of casing.
- ✓ * Based on mudlogging and e-logs, 7.0" casing shoe may be set between 16,000' and 16,400'. Similarly, TD may be from 17,550' to 18,000' as determined by logging and suitable porosity has been exposed. IN ANY EVENT, maximum openhole interval would be from 16,000' to 18,000'.

4. **Cementing Program:**

Surface – LEAD 1255 sx (13.5#; 1.76 ft^3/sk); TAIL 216 (14.8#; 1.34 ft^3/sk) w/ 50 % excess; circulated to surface
1st Intermediate – LEAD 3763 sx (12.7#; 1.94 ft^3/sk); TAIL 470 sx (14.8#; 1.33 ft^3/sk) 50% excess; circulated to surface
2nd Intermediate – LEAD 2042 sx (11.9#; 2.45 ft^3/sk); TAIL 261 sx (14.2#; 1.27 ft^3/sk) 30% excess; circulated to surface.
Prod Liner – 691 sx (14.2#; 1.27 ft^3/sk) 30% excess; TOC = 11,800' calc.

5. **Pressure Control** - BOP diagram is attached to this application. All BOP and related equipment shall comply with well control requirements as described NMOCD Rules and Regulations and API RP 53, Section 17. Minimum working pressure of the BOP and related equipment required for the drillout shall be 5000 psi. The NMOCD Artesia district office shall be notified a minimum of 4 hours in advance for a representative to witness BOP pressure tests. The test shall be performed by an independent service company utilizing a test plug (no cup or J-packer). The results of the test shall be recorded on a calibrated test chart submitted to the OCD district office. Test shall be conducted at:

a. Installation;
b. after equipment or configuration changes;
c. at 30 days from any previous test, and;
d. anytime operations warrant, such as well conditions

Well Program - New Drill (cont.)

6. **Mud Program & Monitoring** - Mud will be balanced for all operations as follows:

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0-1300'	FW Spud Mud	8.5-9.2	70-40	20	12	NC	10.0
1300'-5150'	Brine Water	9.8-10.2	28-32	NC	NC	NC	10.0
5150'-12,000'	FW/Gel	8.7-9.0	28-32	NC	NC	NC	9.5-10.5
12,000'-16,400'	XCD Brine Mud	11.0-	45-48	20	10	<5	9.5-10.5
16,400'-17,550'	FW Mud	8.4-8.6	28-30	NC	NC	NC	9.5-10.5

Mud and all cuttings monitored w/ cuttings recovered for disposal. Returns shall be visually and electronically monitored. In the event of H2S, mud shall be adjusted appropriately by weight and H2S scavengers.

7. **Auxiliary Well Control and Monitoring** – Hydraulic remote BOP operation, mudlogging to monitor returns.

8. **H_2S Safety** - This well and related facilities are not expected to have H2S releases. However, there may be H2S in the area. There are no private residences or pubic facilities in the area but a contingency plan has been developed. Owl SWD Operating, LLC will have a company representative available to personnel throughout all operations. If H2S levels greater than 10ppm are detected or suspected, the H2S Contingency Plan will be implemented at the appropriate level.

H2S Safety - There is a low risk of H2S in this area. The operator will comply with the provisions of Onshore Oil and Gas Order #6.

a) Monitoring - all personnel will wear monitoring devices.

b) Warning Sign - a highly visible H2S warning sign will be placed for obvious viewing at the vehicular entrance point onto location.

c) Wind Detection - two (2) wind direction socks will be placed on location.

d) Communications - will be via cellular phones and/or radios located within reach of the driller, the rig floor and safety trailer when applicable.

e) Alarms - will be located at the rig floor, circulating pump / reverse unit area and the flareline and will be set for visual (red flashing light) at 15 ppm and visual and audible (115 decibel siren) at 20 ppm.

f) Mud program - If H2S levels require, proper mud weight, safe drilling practices and H2S scavengers will minimize potential hazards.

g) Metallurgy - all tublars, pressure control equipment, flowlines, valves, manifolds and related equipment will be rated for H2S service if required.

The Owl SWD Operating, LLC H2S Contingency Plan will be implemented if levels greater than 10ppm H2S are detected.

Well Program - New Drill (cont.)

9. **Logging, Coring and Testing** – Owl SWD Operating expects to run;

   a. CBL (Radial, CET or equivalent) on both intermediate casing strings.
   b. Standard porosity log suite from TD to approximately 15,000'.
   c. No corings or drill tests will be conducted. (The well may potentially be step rate tested in the future if additional injection pressures are required.)

10. **Potential Hazards** - No abnormal pressures or temperatures are expected.

No loss of circulation is expected to occur with the exception of drilling into the target disposal zone. All personnel will be familiar with the safe operation of the equipment being used to drill this well.

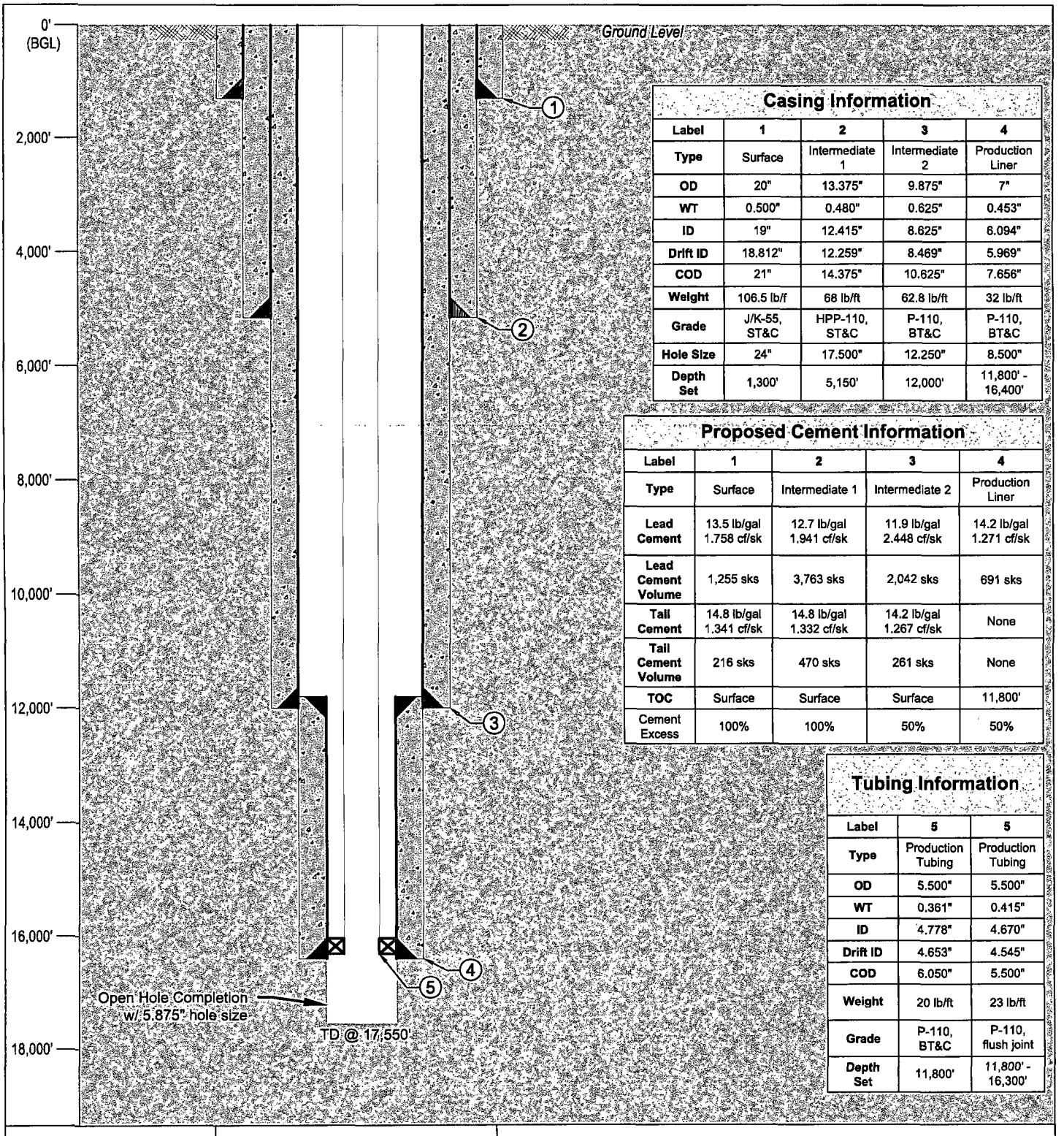
The maximum anticipated bottom-hole pressure is 9000 psi and the maximum anticipated bottom-hole temperature is 190° F.

11. **Waste Management** - All drill cuttings and other wastes associated with and drilling operations will be transported to the Lea County Sundance facility (or alternate), permitted by the Environmental Bureau of the New Mexico Oil Conservation Division.

12. **Anticipated Start Date** - Upon approval of all permits for SWD, operations would begin within 30 days. Completion of the well operations will take six to seven weeks. Installation of the tank battery, berms, plumbing and other and associated equipment would be occurring during the same interval. In any event, it is not expected for the construction phase of the project to last more than 60 days, depending on availability of contractors and equipment. At the time of this submittal, and subject to the availability of the drilling contractor, the anticipated start date is:

September 15, 2015.

13. **Configure for Salt Water Disposal** – Subsequent to SWD permit approval from OCD and prior to commencing any work, an NOI sundry(ies) will be submitted to configure the well for SWD and will detail the completion workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per BLM and OCD test procedures. (Notify BLM and NMOCD 24 hours prior.) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity. Anticipated daily maximum volume is 25,000 bpd and average of 15,000 bpd at a maximum surface injection pressure of 3200 psi (0.2 psi/ft to uppermost injection interval, i.e., casing shoe). If satisfactory disposals rates cannot be achieved at default pressure of .2 psi/ft, Owl Oil and Gas, LLC will conduct a step-rate test and apply for an injection pressure increase 50 psi below parting pressure.



Casing Information

Label	1	2	3	4
Type	Surface	Intermediate 1	Intermediate 2	Production Liner
OD	20"	13.375"	9.875"	7"
WT	0.500"	0.480"	0.625"	0.453"
ID	19"	12.415"	8.625"	6.094"
Drift ID	18.812"	12.259"	8.469"	5.969"
COD	21"	14.375"	10.625"	7.656"
Weight	106.5 lb/f	68 lb/ft	62.8 lb/ft	32 lb/ft
Grade	J/K-55, ST&C	HPP-110, ST&C	P-110, BT&C	P-110, BT&C
Hole Size	24"	17.500"	12.250"	8.500"
Depth Set	1,300'	5,150'	12,000'	11,800' - 16,400'

Proposed Cement Information

Label	1	2	3	4
Type	Surface	Intermediate 1	Intermediate 2	Production Liner
Lead Cement	13.5 lb/gal 1.758 cf/sk	12.7 lb/gal 1.941 cf/sk	11.9 lb/gal 2.448 cf/sk	14.2 lb/gal 1.271 cf/sk
Lead Cement Volume	1,255 sks	3,763 sks	2,042 sks	691 sks
Tail Cement	14.8 lb/gal 1.341 cf/sk	14.8 lb/gal 1.332 cf/sk	14.2 lb/gal 1.267 cf/sk	None
Tail Cement Volume	216 sks	470 sks	261 sks	None
TOC	Surface	Surface	Surface	11,800'
Cement Excess	100%	100%	50%	50%

Tubing Information

Label	5	5
Type	Production Tubing	Production Tubing
OD	5.500"	5.500"
WT	0.361"	0.415"
ID	4.778"	4.670"
Drift ID	4.653"	4.545"
COD	6.050"	5.500"
Weight	20 lb/ft	23 lb/ft
Grade	P-110, BT&C	P-110, flush joint
Depth Set	11,800'	11,800' - 16,300'

LONQUIST & CO. LLC
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HOUSTON | CALGARY
Texas License F-8952
3345 Bee Cave Road, Suite 201
Austin, Texas 78746
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Fax: 512.732.9816

OWL SWD Operating, Inc

Brininstool SWD No. 3

Country: USA	**State/Province:** New Mexico	**County/Parish:** Lea
Survey/STR:	**Site:**	**Status:** To Be Drilled
API No.:	**Field:**	**Ground Elevation:**
State ID No.:	**Project No:**	**Date:** 7/21/2015
Drawn: MMC	**Reviewed:** RSC	**Approved:** SLP
Rev No:	**Notes:** Devonian completion with a 9.875" Intermediate 2 casing.	

APD Calulation Summary
C295:K384

2nd Dia

20	surface csg in a	24	inch hole.		Design Factors		SURFACE	
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight
"A"	106.50	K 55	ST&C	6.93	1.13	0.88	1,300	138,450
"B"							0	0
						Totals:	1,300	138,450

w/8.4#/g mud, 30min Sfc Csg Test psig: 1,120 Tail Cmt does not circ to sfc.

Comparison of Proposed to Minimum Required Cement Volumes

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
24	0.9599	1471	2496	1327	88	10.13	1620	2M	1.50

Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.

#N/A

3rd Dia

13 3/8	casing inside the	20	#N/A		Design Factors		INTERMEDIATE	
Segment	#/ft	Grade	Coupling	#N/A	Collapse	Burst	Length	Weight
"A"	68.00	HPP 110	ST&C	#N/A	#N/A	#N/A	5,150	350,200
"B"							0	0
						Totals:	5,150	350,200

w/8.4#/g mud, 30min Sfc Csg Test psig: The cement volume(s) are intended to achieve a top of 0 ft from surface or a 1300 overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
17 1/2	0.6946	4233	7930	#N/A	#N/A	10.29	4092	5M	#N/A

#N/A

4th Dia

9 7/8	casing inside the	13 3/8			Design Factors		PRODUCTION	
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight
"A"	62.80	p 110	BUTT	2.10	1.53	1.32	12,000	753,600
"B"							0	0
						Totals:	12,000	753,600

w/8.4#/g mud, 30min Sfc Csg Test psig: 2,640 The cement volume(s) are intended to achieve a top of 0 ft from surface or a 5150 overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.2866	2303	5330	#N/A	#N/A	10.80	5593	10M	0.81

Class 'H' tail cmt yld > 1.20 MASP is within 10% of 5000psig, need exrta equip?

5th Dia

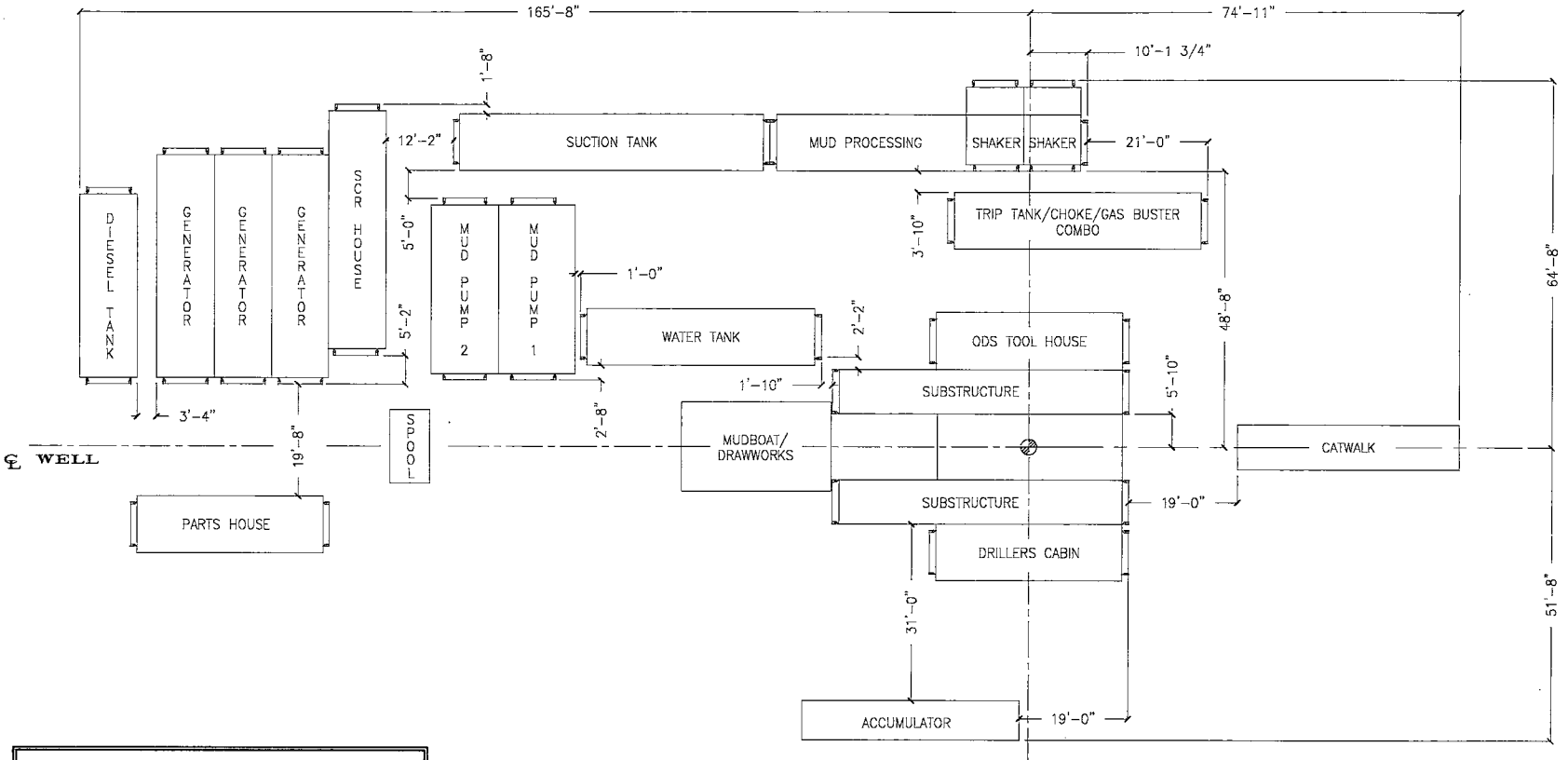
7	Liner w/top @	11800			Design Factors		LINER	
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	Weight
"A"	32.00	P 110	BUTT	1.95	1.17	1.27	4,600	147,200
"B"							0	0
						Totals:	4,600	147,200

w/8.4#/g mud, 30min Sfc Csg Test psig: 992 The cement volume(s) are intended to achieve a top of 11800 ft from surface or a 200 overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
8 1/2	0.1268	691	878	595	48	10.80			0.422

Capitan Reef est top XXXX. MASP is within 10% of 5000psig, need exrta equip?

RIG 224 LAYOUT



MINIMUM LOCATION SIZE FROM WELL CENTER	
TO CATWALK	150'-0"
TO GENERATORS	190'-0"
TO RESERVE PIT	80'-0"
TO DOG HOUSE SIDE	125'-0"

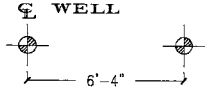
Brininstool SWD No.3 Setup

North

0'-0" 20'-0" 40'-0"

℄ WELL

MOUSE HOLE CONFIGURATION



SCALE 4X

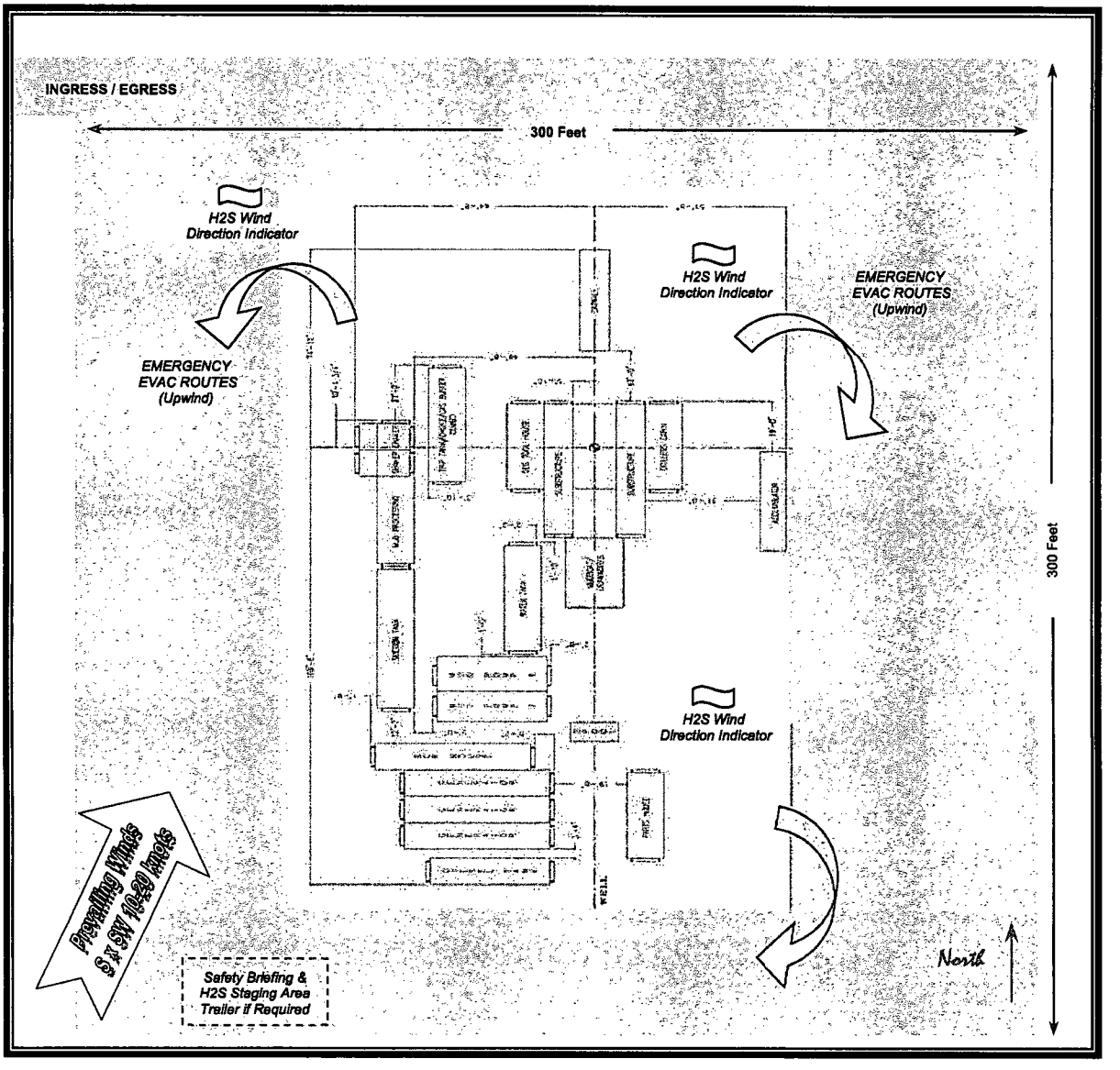
RAT HOLE DEPTH--68' AT 2" SLOPE

SIDEWINDER DRILLING

JAN 31, 2015

OILFIELD WATER LOGISTICS

Brininstool SWD No.3 – Site Layout w/ H2S & Safety Items
Sidewinder Rig 224

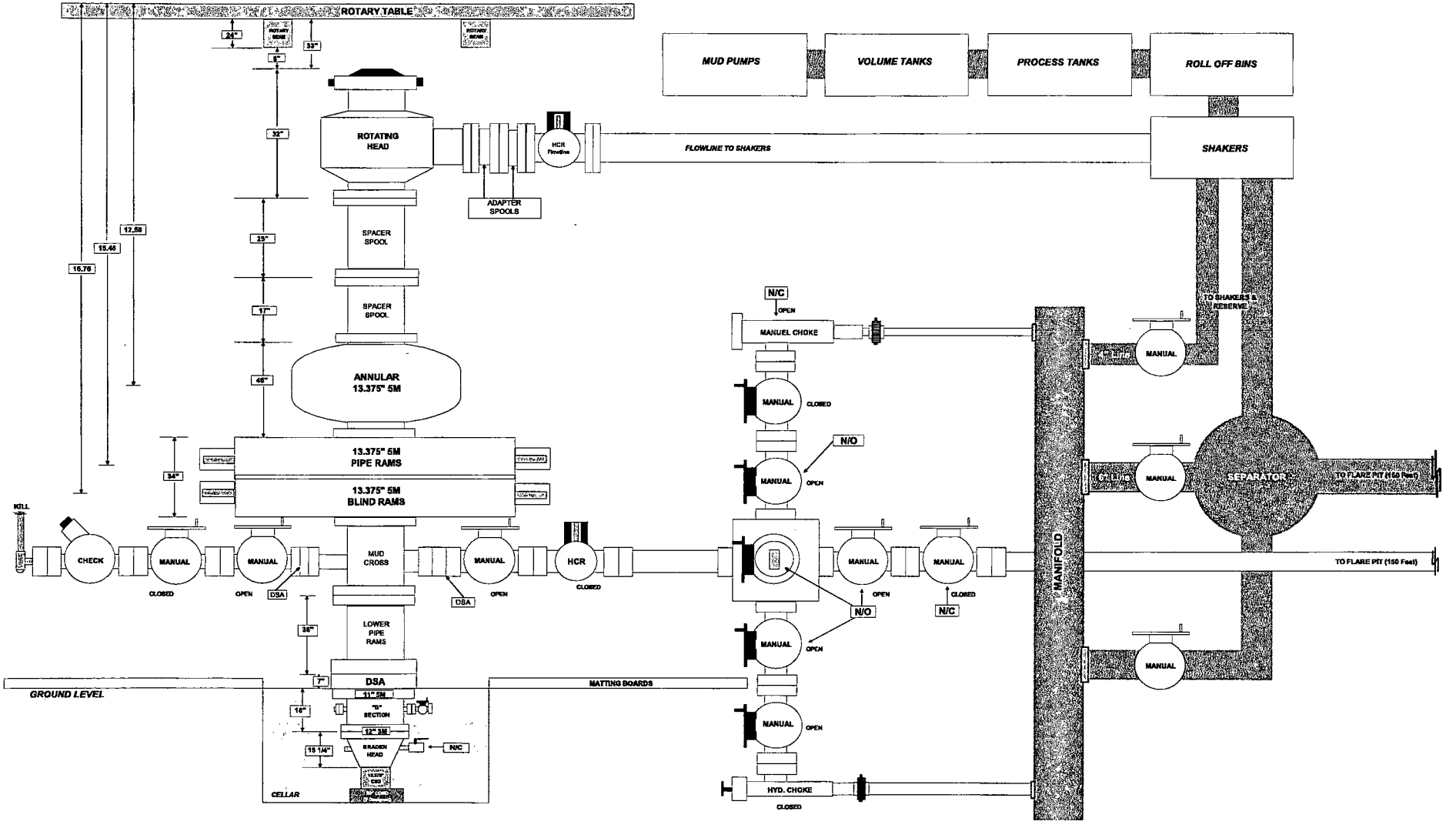


1. MIRU Drilling and drilling support contractors / equipment.
2. Set up H2S wind direction indicators; brief all personnel on Emergency Evacuation Routes.
3. All contractors conduct safety meeting prior to current task.
4. If H2S levels >20ppm detected, implement H2S Plan *accordingly*. (e.g., cease operations, shut in well, employ H2S safety trailer & personnel safety devices, install flare line, etc. - refer to plan.)
5. All equipment inspected daily. Repair / replace as required.
6. Mud logger monitoring returns; cuttings & waste hauled to specified facility. CRI - LEA COUNTY
7. Spills contained & cleaned up immediately. Repair or otherwise correct the situation within 48 hours before resuming operations. Notify OCD within 24 hours. Remediation started ASAP if required. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate.
8. Sundry forms filed as needed - casing, cement, etc. - operations continue to completion

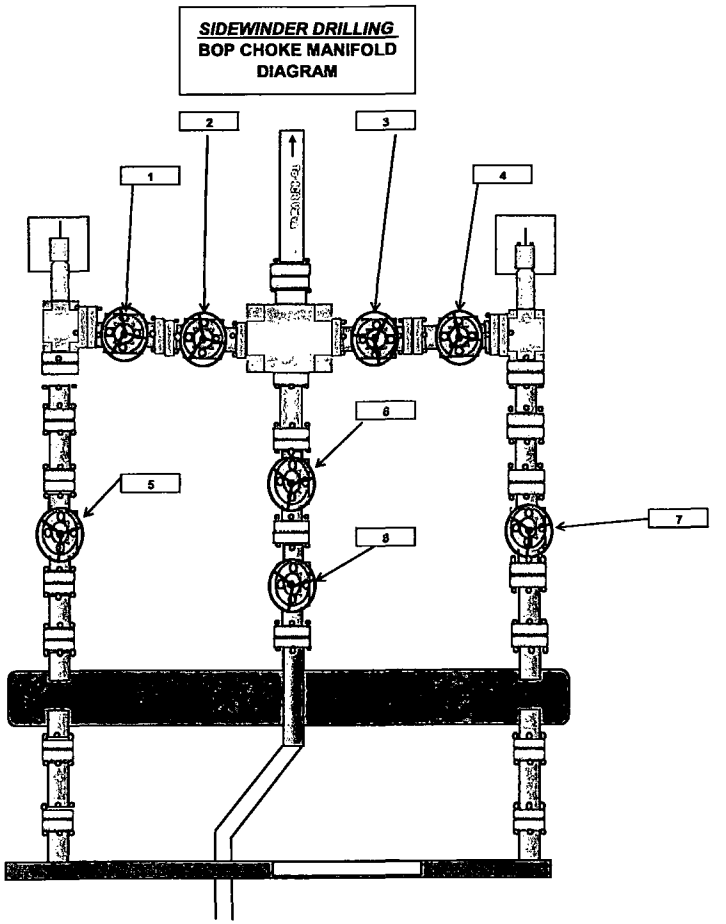
SOS Consulting, LLC

HYDRIL BOP & CLOSED LOOP - SIDEWINDER RIG 224

BOPE 5K & Closed-Loop Schematic
(w/ 13.375" Rams)



Rig	224
Qty.	BOP Inventory Sheet
	Annular Preventer
Model	hydrill
Size	13 5/8
Working Pressure	3000
Serial Number	307291
Top Connection	3000
Bottom Connection	5000
	Ram Preventers
Double / Single	double
Model	lasom s
Size	13 5/8
Working Pressure	5000
Serial Number	134754
Top Connection	5000
Bottom Connection	5000
Qty. Side Outlets	4
Size of Side Outlets	4"
PSI Rating of Side Outlets	5000
	Ram Preventers
Double / Single	n/a
Model	n/a
Size	n/a
Working Pressure	n/a
Serial Number	n/a
Top Connection	n/a
Bottom Connection	n/a
Qty. Side Outlets	n/a
Size of Side Outlets	n/a
PSI Rating of Side Outlets	n/a
	Rams
Size & Designation	varibale rams / top
Size & Designation	blindes / bottom
Size & Designation	
Size & Designation	
Size & Designation	
	Wing Valves
Size	4"
Working Pressure	5000
Serial Number	v062
Designation	kill side
Flange Size	px160
Flange Rating	5000
	Wing Valves
Size	4"
Working Pressure	5000
Serial Number	n/a
Designation	chock side
Flange Size	px160
Flange Rating	5000
	Drilling Spool
Size	13 5/8
Working Pressure	5000
Serial Number	113012676k
Top Connection	5000
Bottom Connection	5000
Qty. Side Outlets	2
Size of Side Outlets	4
PSI Rating of Side Outlets	5000
	Choke Manifold #1 Valve
Make	n/a
Model	n/a
Serial Number	n/a
	Choke Manifold #2 Valve
Make	horn equipment
Model	130053
Serial Number	39890
	Choke Manifold #3 Valve
Make	horn equipment
Model	130053



CHOKE MANIFOLD DIAGRAM - SIDEWINDER RIG 224