District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

☐AMENDED REPORT

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

1. Operator Name and Address	2. OGRID Number
Probity SWD, LLC PO Box 7307 Midland, TX 79708	296278
	3. API Number 30-015-45670

4. Property Code	5. Property Name	6. Well No.
324927	Mac-Brant East SWD	1

7. Surface Location
(To be verified by field survey)

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
N	23	24S	29E		1160	FSL	2590	FWL	EDDY

8. Proposed Bottom Hole Location
(To be verified by field survey)

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
N	23	24S	29E		1160	FSL	2590	FWL	EDDY

9. Pool Information

Pool Name	Pool Code
SWD; Devonian-Silurian	97869

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
N	SWD	R	P	3035’
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
No	16,500’	Devonian	TBD	3/15/2019

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water
21’ avg	2915’	>1mile

☒**We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	26.5”	20.0”	94.0 lb/ft	350’	1050	SURFACE
Intermdt	17.5”	13.375”	68.0 lb/ft	3280’	1600	SURFACE
Production	12.25”	9.625”	53.5 lb/ft	11,000’	2350	SURFACE
Liner	8.5”	7.625”	39.0 lb/ft	10,700’-15,000’	450	TOL
OH	6.5”			15,000’ – 16,500’		

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Hydraulic/Blinds, Pipe	10000	10000	Hydril, Cameron or Equivalent

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐, if applicable.** Signature: Ben Stone	OIL CONSERVATION DIVISION Approved By:
Printed name: Ben Stone	Title:
Title: Agent for Probity SWD, LLC	Approved Date: / Expiration Date:
E-mail Address: ben@sosconsulting.us	
Date: 11/22/2021 / Phone: 903-488-9850	Conditions of Approval Attached

DISTRICT I
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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-45670	97869	SWD; Devonian-Silurian

Property Code	Property Name	Well Number
324927	MAC BRANT EAST SWD	1

OGRID No.	Operator Name	Elevation
296278	PROBITY SWD, LLC.	3035'

Surface Location

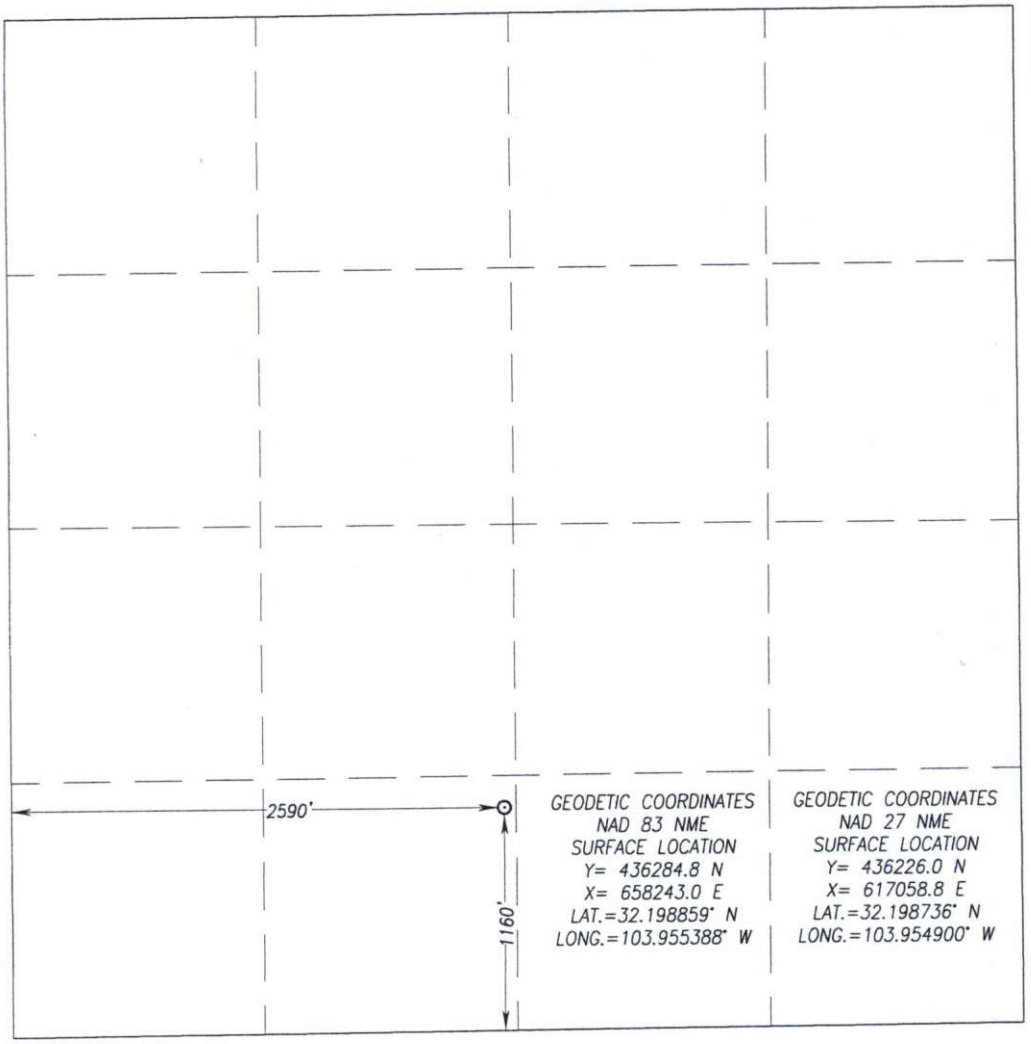
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	23	24-S	29-E		1160	SOUTH	2590	WEST	EDDY

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 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 11/22/2021 Date

Ben Stone
Printed Name

ben@sosconsulting.us
E-mail 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 supervision, and that the same is true and correct to the best of my belief.

DECEMBER 10, 2018
Date of Survey

Signature & Seal of Professional Surveyor:

RONALD J. EIDSON NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR

12/27/2018

Certificate Number Gary G. Eidson 12641
Ronald J. Eidson 3239

LSL JWSC W.O.: 18.11.1316

Probity SWD, LLC
Mac Brant East SWD Well No.1
1160' FSL & 2590' FWL
Section 23, Twp 24-S, Rng 29-E
Eddy County, New Mexico

PLEASE NOTE – SPECIAL CONSIDERATIONS

This C-101 is being submitted to reinstate or otherwise maintain the existing API number. The original APD expired January 31, 2021

Nothing has changed – as instructed by OCD Engineering, this C-101 is being submitted only to reactivate the API and well file information.

The existing permit, SWD-1874, was requested to be extended on 2/09/2021 – OCD engineering confirmed on 11/17/2021 that the extension request was filed timely and that review was still in process. Per that email, they deferred the decision to retain the current API number would be decided during the review of this new C-101.

Probity believes it would make tracking and recordkeeping simpler for all intents and purposes.

Probity SWD, LLC

Mac Brant East SWD Well No.1
1160' FSL & 2590' FWL
Section 23, Twp 24-S, Rng 29-E
Eddy County, New Mexico

Well Program - New Drill

Objective: Drill new well for commercial salt water disposal into the Devonian and Silurian; mudlogging and e-logging to determine final depths.

1. **Geologic Information** - Devonian Formation

The Devonian and Silurian both consist of carbonates including light colored dolomite and chert intervals interspersed with some tight limestone intervals. Several thick sections of porous dolomite capable of taking water are present within the subject formations in the area. Depth control data was inferred from deep wells to the north, south and east. If the base of Devonian and top of Silurian and/or Ordovician rocks come in as expected the well will only be drilled deep enough for adequate logging rathole.

Estimated Formation Tops:

B/Fresh Water	250’
Salado	275’
B/Salt	2750’
Delaware Sand	3000’
Bone Spring	6700’
Wolfcamp	10000’
Strawn	12100’
Morrow	12950’
Woodford Shale	14800’
Devonian	15000’
Fusselman	16250’
Total Depth	16500’
Ellenburger (est.)	17300’

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. (R360, Eddy County or 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.
g. Sundry forms filed as needed - casing, cement, etc. - operations continue to completion.

Well Program - New Drill (cont.)

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

STRING	HOLE SZ	DEPTH	CSG SZ	COND	WT/GRD	CLLPS/BRS	TNSN
						(Minimum Safety Factors)	
Surface	26.0"	0-350'	20.0"	New	94.0 lb. J/K-55	1.125/1.1	1.8
Intermediate	17.5"	0-3280'	13.375"	New	68.0 lb. K-55	1.125/1.1	1.8
2nd Inter	12.25"	0-11,000'	9.625"	New	53.5 lb. P-110	1.125/1.1	1.8
Prod/ Liner*	8.5"	10,700'-15,000'	7.625"	New	39.0 lb. P-110	1.125/1.1	1.8
Openhole*	6.5" hole	15,000'-16,500'	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, 7.625" casing shoe is expected to be set at 15,000'. TD may be from 16,250' to 16,500' as determined by logging and suitable porosity has been exposed. IN ANY EVENT, maximum openhole interval would be from 15,000' to 16,500' and sundry notice will document such events and a C-105 completion report filed within 60 days.

4. **Cementing Program:**

Surface – LEAD Slurry: 800 sacks of Class C containing 4% gel + 2% CaCl2 + .4 pps defoamer + .125 pps cello flake + 3 pps Koal Seal. Weight 13.7 ppg, yield 1.68 ft3/sack; TAIL Slurry: 250 sacks of Class C Neet containing 2% CaCl2. Weight 14.8 ppg, yield 1.34 ft3/sack; 100% excess, circulate to surface.

1st Intermediate – LEAD Slurry: 1,335 sacks of Class C containing 4% gel + .4 pps defoamer + .125 pps cello flake + 5% NaCl. Weight 13.2 ppg, yield 1.83 ft3/sack; TAIL Slurry: 265 sacks of Class C Neet. Weight 14.8 ppg, yield 1.32 ft3/sack; 50% excess, circulate to surface.

Production – LEAD Slurry: 1,700 sacks of Class H containing 10% gel + .4 pps defoamer + .125 pps cello flake + 1 pps Koal Seal + 5% NaCL. Weight 11.9 ppg, yield 2.473 ft3/sack; TAIL Slurry: 650 sacks of Class H containing 2% retarder + .2 pps defoamer. Weight 15.6 ppg, yield 1.18 ft3/sack; 30% excess, circulate to surface.

Liner – Slurry: 450 sacks of Class H containing .3% retarder + .7% fluid loss additive + .2% dispersant + .4 pps defoamer +.1% Anti-Settling agent. Weight 15.2 ppg, yield 1.32 ft3/sack. 30% excess; TOC calculated @ Top of Liner 10,700'.

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 drilling shall be 10000 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

Well Program - New Drill (cont.)

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

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

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0-350'	FW Spud Mud	8.5-9.2	70-40	20	12	NC	10.0
350'-3280'	Brine Water	9.8-10.2	28-32	NC	NC	NC	10.0
3280'-11,000'	FW/Gel	8.7-9.0	28-32	NC	NC	NC	9.5-10.5
11,000'-15,000'	XCD Brine Mud	11.0-12.5	45-48	20	10	<5	9.5-10.5
15,000'-16,500'	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 H_2S, mud shall be adjusted appropriately by weight and H_2S 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 H_2S releases. However, there may be H_2S in the area. There are no private residences or pubic facilities in the area but a contingency plan has been developed. Probity SWD, LLC will have a company representative available to personnel throughout all operations. If H_2S levels greater than 10ppm are detected or suspected, the Probity SWD H_2S Contingency Plan will be implemented at the appropriate level.

H2S Safety - There is a low risk of H_2S in this area. The operator will comply with the provisions of NMAC 19.15.11 and BLM Onshore Oil and Gas Order #6.

a) Monitoring - all personnel will wear monitoring devices.

b) Warning Sign - a highly visible H_2S 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.

Well Program - New Drill (cont.)

f) Mud program - If H_2S levels require, proper mud weight, safe drilling practices and H_2S scavengers will minimize potential hazards.

g) Metallurgy - all tublars, pressure control equipment, flowlines, valves, manifolds and related equipment will be rated for H_2S service if required.

The Probity SWD, LLC H_2S Contingency Plan will be implemented if levels greater than 10ppm H_2S are detected.

9. **Logging, Coring and Testing** – Probity SWD, LLC expects to run;

a. Mud logging through the interval will ensure the target interval remains Devonian and Silurian.
b. CBL (Radial, CET or equivalent) on both intermediate casing strings.
c. Standard porosity log suite from TD to approximately 8,500'.
d. 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 7200 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:

June 1, 2022.

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 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 17,500 bpd at a maximum surface injection pressure of 3000 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, Probity SWD, LLC will conduct a step-rate test and apply for an injection pressure increase 50 psi below parting pressure.

Probity SWD, LLC
Mac Brant East SWD Well No.1
1160' FSL & 2590' FWL
Section 23, Twp 24-S, Rng 29-E
Eddy County, New Mexico

McVay Rig #2
Well Control Plan

Well Control Procedures

Component and Preventer Compatibility Table

Component	*OD*	*Preventer*	*WP*
Drill Pipe	5"	Upper VBR: 4"-7" Lower: 5" fixed	10M
Heavyweight Drill Pipe	5"	Upper VBR: 4"-7" Lower: 5" fixed	10M
Drill Collars & MWD Tools		Upper VBR: 4"-7"	10M
Mud Motor	6 1/2"	Upper VBR: 4"-7"	10M
Production Casing	5 1/2"	Upper VBR: 4"-7"	10M
All	0-13 5/8"	Annular	5M
Open Hole		Blind Rams	10M

1. *General Procedures While Drilling:*

a. Sound alarm - alert crew
b. Space out drill string
c. Shut down pumps and stop rotary
d. Open HCR
e. Shut well in, utilizing upper VBRs
f. Close choke
g. Confirm shut in
h. Notify rig manager and Probity company representative
i. Call Probity engineer
j. Read and record:
    i. Shut in drill pressure and shut in casing pressure
    ii. Pit gain
    iii. Time
k. Regroup, identify forward plan

2. *General Procedures While Tripping:*

a. Sound alarm - alert crew
b. Stab full opening safety valve and close
c. Space out drill string
d. Open HCR
e. Shut well in, utilizing upper VBRs
f. Close choke
g. Confirm shut in
h. Notify rig manager and Probity company representative

McVay Rig #2
Well Control Plan (pg.2)

i. Call Probity engineer
j. Read and record:
    i. Shut in drill pressure and shut in casing pressure
    ii. Pit gain
    iii. Time
k. Regroup, identify forward plan

3. *General Procedures While Running Casing:*

a. Sound alarm - alert crew
b. Stab full opening safety valve and close
c. Space out drill string
d. Open HCR
e. Shut well in, utilizing upper VBRs
f. Close choke
g. Confirm shut in
h. Notify rig manager and Probity company representative
i. Call Probity engineer
j. Read and record:
    i. Shut in drill pressure and shut in casing pressure
    ii. Pit gain
    iii. Time
k. Regroup, identify forward plan

4. *General Procedures With No Pipe in Hole (Open Hole):*

a. Sound alarm - alert crew
b. Open HCR
c. Shut well in with blind rams
d. Close choke
e. Confirm shut in
f. Notify rig manager and Probity company representative
g. Call Probity engineer
h. Read and record:
    i. Shut in drill pressure and shut in casing pressure
    ii. Pit gain
    iii. Time
i. Regroup, identify forward plan

5. ***General Procedures While Pulling BHL Through BOP Stack:***

l. Prior to pulling last joint of drill pipe through stack, perform flow check and if flowing:
    a. Sound alarm - alert crew
    b. Stab full opening safety valve and close
    c. Space out drill string with tool joint just beneath upper pipe ram
    d. Open HCR
    e. Shut well in utilizing upper VBRs
    f. Close choke
    g. Confirm shut in
    h. Notify rig manager and Probity company representative

McVay Rig #2
Well Control Plan (pg.3)

i. Call Probity engineer
j. Read and record:
    i. Shut in drill pressure and shut in casing pressure
    ii. Pit gain
    iii. Time
k. Regroup, identify forward plan

2. With BHL in the BOP stack and compatible ram preventer and pipe combo immediately available.
    a. Sound alarm - alert crew
    b. Stab full opening safety valve and close
    c. Space out drill string with tool joint just beneath upper pipe ram
    d. Open HCR
    e. Shut well in utilizing upper VBRs
    f. Close choke
    g. Confirm shut in
    h. Notify rig manager and Probity company representative
    i. Call Probity engineer
    j. Read and record:
        i. Shut in drill pressure and shut in casing pressure
        ii. Pit gain
        iii. Time
    k. Regroup, identify forward plan

3. With BHA in the BOP stack and no compatible ram preventer and pipe combo immediately available
    a. Sound alarm - alert crew
    b. If possible to pick up high enough, pull string clear of the stack and follow ***Open Hole*** scenario
    c. If impossible to pick up high enough to pull the string clear of the stack:
        i. Stab crossover, make up one joint/stand of drill pipe and full opening safety valve and close
        ii. Space out drill string with tool joint just beneath the upper pipe ram
        iii. Open HCR
        iv. Shut in utilizing upper VBRs
        v. Close choke
        vi. Confirm shut in
        vii. Notify rig manager and Probity company representative
        viii. Read and record:
            1. Shut in drill pipe pressure and shut in casing pressure
            2. Pit gain
            3. Time
            d. Regroup and identify forward plan

If annular is used to shut in well and pressure build to or is expected to get to 50% of Rated Working Pressure (RWP), confirm space-out and swap to upper VBRs for shut in.

WELL SCHEMATIC - PROPOSED
Mac-Brant East SWD Well No.1

API 30-015-45670

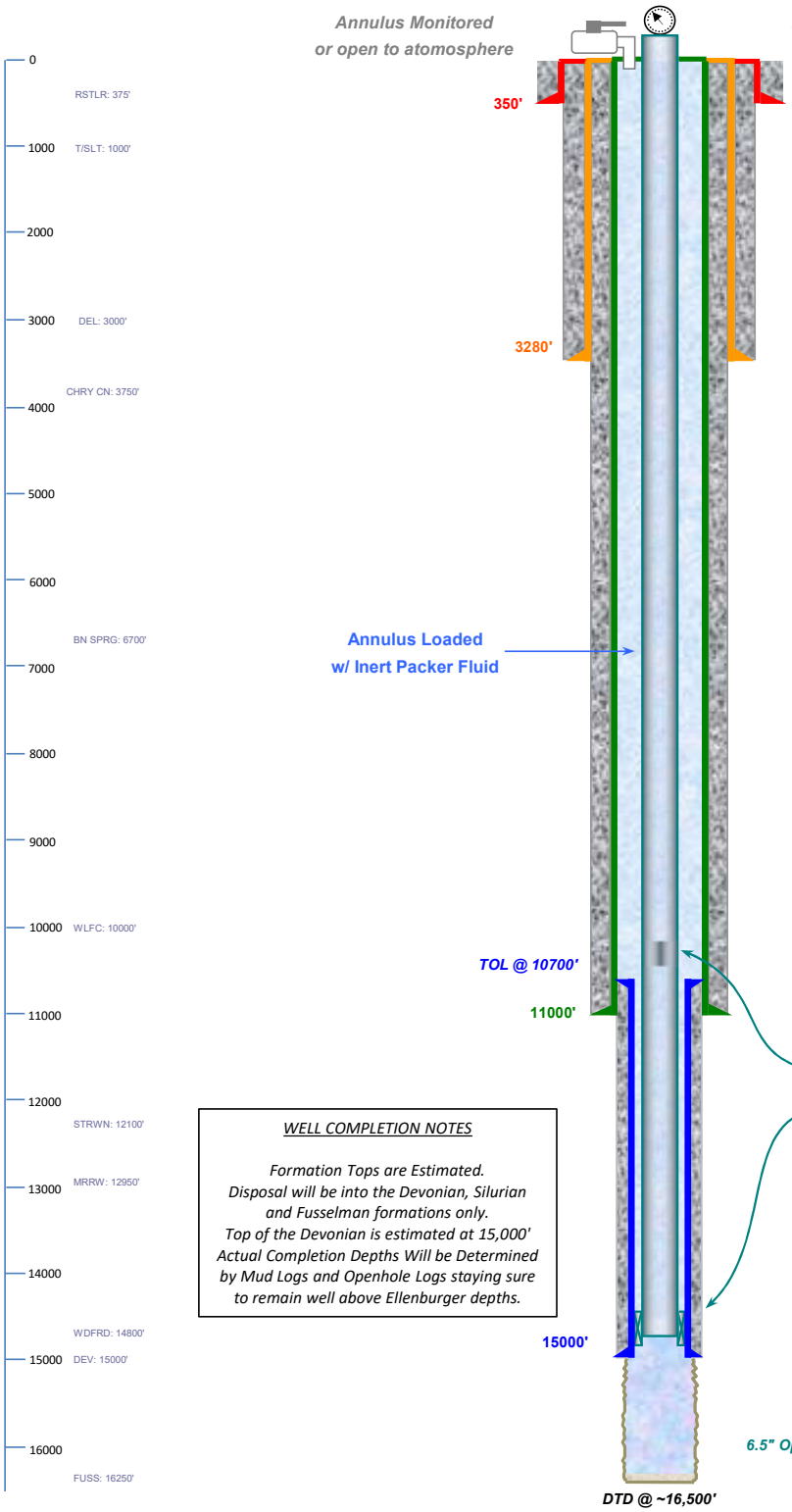
1160' FSL & 2590' FWL, SEC. 23-T24S-R29E
EDDY COUNTY, NEW MEXICO

Proposed: SWD; Devonian-Silurian-Fusselman

Spud Date: 6/01/2022
SWD Config Dt: 7/15/2022

Annulus Monitored or open to atomosphere

Injection Pressure Regulated and Volumes Reported
3000 psi Max. Surface (0.2 psi per foot)



Surface Casing
20.0", 94.0# J-55 Csg. (26.0" Hole) @ 350'
1050 sx - Circulated to Surface

Intermediate Casing
13.375", 68.0# Csg. (17.5" Hole) @ 3280'
1600 sx - Circulated to Surface

Drill and set casing as designed w/ all strings cemented to surface. Install 7.625" liner @ ~15,000 w/ 450 sx to TOL. Drill 6.5" openhole to approx. 16,500' TD w/ mudlog for interval/ formation verification. Acidize formation; run 5.5" (5.0" FJ inside liner) injection TBG on PKR set at 14,900'.+ Conduct OCD witnessed MIT. Well ready for injection upon completion of surface facilities.

Annulus Loaded w/ Inert Packer Fluid

Production Casing
9.625", 53.5# P-110 Csg. (12.25" Hole) @ 11000'
2350 sx - Staged; Circulate to Surface
(DV @~5800')

Split String Tubing Transition ~10,640'
5.5" to liner w/ 5.0" Flush Joint inside liner
IPC Tubing set in PKR ~14,900'
(Within 100' of Uppermost Disposal Interval)

WELL COMPLETION NOTES

Formation Tops are Estimated. Disposal will be into the Devonian, Silurian and Fusselman formations only. Top of the Devonian is estimated at 15,000' Actual Completion Depths Will be Determined by Mud Logs and Openhole Logs staying sure to remain well above Ellenburger depths.

Liner Casing
7.625", 39.0# P-110 Csg (8.5" Hole) 10,700' to 15,000'
450 sx Cls H - TOC @ Top of LNR

6.5" Openhole Interval: 15,000' to 16,500' (Maximum)

Drawn by: Ben Stone, Rvs'd 11/22/2021

HYDROGEN SULFIDE CONTINGENCY PLAN

POLICY OF

PROBITY SWD, LLC

FOR OPERATIONS IN SOUTHEAST NEW MEXICO

MUST BE REVIEWED BY ALL PERSONNEL
PRIOR TO COMMENCEMENT OF OPERATIONS

(Revised August 2021)

SCOPE

THIS CONTINGENCY PLAN ESTABLISHES GUIDELINES FOR ALL COMPANY AND CONTRACTOR PERSONNEL WHO'S WORK ACTIVITIES MAY INVOLVE EXPOSURE TO HYDROGEN SULFIDE (H2S) GAS. GUIDELINES ADDRESSING PUBLIC SAFETY ARE INCLUDED.

OBJECTIVE

1. PREVENT ANY AND ALL ACCIDENTS AND PREVENT THE UNCONTROLLED RELEASE OF HYDROGEN SULFIDE INTO THE ATMOSPHERE.

2. PROVIDE PROPER PROCEDURES TO HANDLE EMERGENCIES AND POSSIBLE EVACUATION.

3. PROVIDE IMMEDIATE AND ADEQUATE MEDICAL ATTENTION SHOULD AN INJURY OCCUR.

COMPLIANCE

THIS PLAN COMPLIES WITH NEW MEXICO OIL CONSERVATION DIVISION RULES AND REGULATIONS PER 19.15.11.9 NMAC (December 2008), API RP49 (May 2001).

IMPLEMENTATION

THIS PLAN WITH ALL DETAILS IS TO BE FULLY IMPLEMENTED BEFORE OPERATIONS COMMENCE PURSUANT TO THE CONDITION BEING:

NORMAL / LOW CONDITIONS: KNOWN H2S ***IS AT OR LESS THAN 10 PPM.***
HIGH RISK CONDITIONS: KNOWN H2S ***MAY APPROACH OR BE MORE THAN 100 PPM.***

ACTIVATE EMERGENCY RESPONSE PLAN: *WHEN A RELEASE MAY CREATE AN H2S CONCENTRATION OF* ***MORE THAN 100 PPM IN A PUBLIC AREA, 500 PPM AT A PUBLIC ROAD OR 100 PPM 3000 FEET FROM THE SITE OF RELEASE.***

- ***FOR A SPECIFIC PROJECT, APPLICABLE MAPS WILL BE SUBMITTED FOR THE LOCATION TO DETAIL MEETING PLACES, EVACUATION ROUTES AND ROAD CONTROL MEASURES AS APPROPRIATE.***
- ***THE COMPANY REPRESNTATIVE OR DESIGNEE SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THIS PLAN AND IN COMPLETE COMMAND DURING ANY EMERGENCY.***

OVERVIEW OF PLAN

APPENDICES

I. PERSONNEL RESPONSIBILITY

COMPANY FOREMAN / DESIGNATED PERSONNEL	SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THIS PLAN. SHALL BE IN COMPLETE COMMAND DURING ANY EMERGENCY. SHALL DESIGNATE A BACK-UP.
ALL PERSONNEL	1. ON ALARM, DON ESCAPE UNIT AND REPORT IN UP WIND BRIEFING AREA. 2. CHECK STATUS OF PERSONNEL (BUDDY SYSTEM). 3. SECURE BREATHING EQUIPMENT. 4. AWAIT ORDERS FROM SUPERVISOR.
DRILLING FOREMAN / RIG OPERATOR	1. REPORT TO UP WIND BRIEFING AREA. 2. DON BREATHING EQUIPMENT AND RETURN TO POINT OF RELEASE WITH TOOL PUSHER OR DRILLER (BUDDY SYSTEM). 3. DETERMINE H2S CONCENTRATIONS. 4. ASSESS SITUATION AND TAKE CONTROL MEASURES.
TOOL PUSHER	1. REPORT TO UP WIND SAFETY BRIEFING AREA. 2. DON BREATHING EQUIPMENT AND RETURN TO POINT OF RELEASE WITH DRILLING FOREMAN OR DRILLER (BUDDY SYSTEM). 3. DETERMINE H2S CONCENTRATION. 4. ASSESS SITUATION AND TAKE CONTROL MEASURES.
DRILLER	1. DON ESCAPE UNIT. 2. CHECK MONITOR FOR POINT OF RELEASE. 3. REPORT TO BRIEFING AREA. 4. CHECK STATUS OF PERSONNEL (IN AN ATTEMPT TO RESCUE, USE THE BUDDY SYSTEM). 5. ASSIGNS LEAST ESSENTIAL PERSON TO NOTIFY DRILLING FOREMAN AND TOOL PUSHER BY QUICKEST MEANS IN CASE OF THEIR ABSENCE. 6. ASSUMES THE RESPONSIBILITIES OF THE DRILLING FORMAN AND TOOL PUSHER UNTIL THEY ARRIVE SHOULD THEY BE ABSENT.
DERRICK MAN FLOOR MAN #1 FLOOR MAN #2	WILL REMAIN IN SAFETY BRIEFING AREA UNTIL INSTRUCTED BY SUPERVISOR.
MUD ENGINEER	1. REPORT TO BRIEFING AREA. 2. WHEN INSTRUCTED, BEGIN CHECK OF MUD FOR PH AND H2S LEVEL.

SAFETY PERSONNEL	I. MASK UP AND CHECK STATUS OF ALL PERSONNEL AND SECURE OPERATIONS AS INSTRUCTED BY DRILLING FOREMAN AND REPORT TO BRIEFING AREA.

2. NORMAL / LOW H2S CONDITION

CONDITIONS ARE CONSIDERED NORMAL WHEN THERE ARE REASONABLE EXPECTATIONS THAT NONE OR LOW CONCENTRATIONS OF H2S WILL BE ENCOUNTERED DURING ALL PHASES OF THE CURRENT OPERATIONS. (SEE APPENDIX 'C', THRESHOLDS, PRGPH.3)

1. LOW H2S - LEVELS ARE KNOWN TO CONSISTENTLY BE AT OR **BELOW 10 PPM**.

2. NORMAL CONDIDTION EXPECTATIONS ARE BASED ON HISTORICAL EVIDENCE OF THE AREA, GEOLOGIC FORMATIONS AND TYPE OF OPERATIONS WITH REGARD TO FLUIDS BEING UTILIZED FOR DRILLIING AND/OR WORKOVER TASKS.

3. OPERATING IN A NORMAL CONDITION DOES NOT RELIEVE ANY PERSONNEL OF THEIR RESPONSIBILITY, NOR SHOULD IT LESSEN THEIR ATTENTION TO KNOWING THE SAFETY PROCEDURES THAT WILL IMMEDIATELY BE IMPLEMENTED UPON ANY EVIDENCE OF CHANGING H2S LEVELS.

4. ALL PERSONNEL WORKING ON SITE WILL DON PERSONAL H2S DETECTORS.

5. A WINDSOCK OR OTHER WIND DIRECTION INDICATOR WILL BE ON LOCATION AND EASILY VISIBLE FROM ALL AREAS.

6. ALL PERSONNEL WILL HAVE A CURRENT H2S TRAINING CARD.

7. ALL PERSONNEL WILL HAVE VIEWED THIS H2S CONTINGENCY PLAN.

3. EMERGENCY RESPONSE PROCEDURES

NOTICE: FOR ALL SITES AND OPERATIONS WHERE REASONABLE EXPECTATIONS ARE THAT H2S LEVELS MAY BE **ABOVE 100 PPM**, ALL SERVICE COMPANY PERSONNEL HAVE READ THIS H2S CONTINGENCY PLAN AND WILL VERBALLY INDICATE STRICT ADHERENCE TO WITH ALL PROCEDURES ESPECIALLY WITH REGARD TO THEIR JOB TITLE AND DUTIES ON THIS LOCATION.

IMMEDIATE PROCEDURES

A. IN THE EVENT OF ANY EVIDENCE OF H2S LEVEL **ABOVE 100 PPM**, (OR IS APPROACHING 100 PPM) TAKE THE FOLLOWING STEPS:

1. SECURE BREATHING EQUIPMENT.

2. ORDER NON-ESSENTIAL PERSONNEL OUT OF DANGER ZONE.

3. TAKE STEPS TO DETERMINE IF THE H2S LEVEL CAN BE CORRECTED OR SUPPRESSED AND, IF SO, PROCEED IN NORMAL OPERATION.

B. IF UNCONTROLLABLE CONDITIONS OCCUR:

1. TAKE STEPS TO PROTECT AND/OR REMOVE ANY PUBLIC IN THE DOWN-WIND AREA FROM THE RIG - PARTIAL EVACUATION AND ISOLATION. NOTIFY NECESSARY PUBLIC SAFETY PERSONNEL AND THE BUREAU OF LAND MANAGEMENT OF THE SITUATION.

2. REMOVE ALL PERSONNEL TO SAFE BREATHING AREA.

3. NOTIFY PUBLIC SAFETY PERSONNEL TO SAFE BREATHING AREA.

4. PROCEED WITH BEST PLAN (AT THE TIME) TO REGAIN CONTROL OF THE WELL. MAINTAIN TIGHT SECURITY AND SAFETY PROCEDURES.

EMERGENCY ACTIONS

WELL BLOWOUT - IF EMERGENCY

1. EVACUATE ALL PERSONNEL IF POSSIBLE.

2. IF SOUR GAS - EVACUATE RIG PERSONNEL.

3. IF SOUR GAS - EVACUATE PUBLIC WITHIN 3000 FT RADIUS OF EXPOSURE.

4. DON SCBA AND RESCUE.

5. CALL 911 FOR EMERGENCY HELP (FIRE DEPT AND AMBULANCE) AND NOTIFY COMPANY FOREMAN / DESIGNATED PERSONNEL.

6. GIVE FIRST AID.

PERSON DOWN LOCATION / FACILITY

1. IF IMMEDIATELY POSSIBLE, CONTACT 911. GIVE LOCATION AND WAIT FOR CONFIRMATION.

2. DON SCBA AND RESCUE.

AS APPLICABLE FOR TODAY'S CURRENT OPERATIONS / EVENTS

TAKING A KICK

WHEN TAKING A KICK DURING AN H2S EMERGENCY, ALL PERSONNEL WILL FOLLOW STANDARD BOP PROCEDURES AFTER REPORTING TO ·BRIEFING AREA AND MASKING UP.

OPEN-HOLE LOGGING

ALL UNNECESSARY PERSONNEL OFF FLOOR. DRILLING FOREMAN AND SAFETY PERSONNEL SHOULD MONITOR CONDITION, ADVISE STATUS AND DETERMINE NEED FOR USE OF AID EQUIPMENT.

RUNNING CASING OR PLUGGING

FOLLOWING THE SAME PROCEDURE AS ABOVE. DRILLING FOREMAN AND SAFETY PERSONNEL SHOULD DETERMINE IF ALL PERSONNEL HAVE ACCESS TO PROTECTIVE EQUIPMENT.

WELL OUT OF CONTROL

THE DECISION TO IGNITE THE WELL IS THE RESPONSIBILITY OF COMPANY FOREMAN. IN THE EVENT HE IS INCAPACITATED, IT BECOMES THE RESPONSIBILITY OF THE CONTRACT RIG TOOL PUSHER. THE DECISIONSHOULD BE MADE ONLY AS A LAST RESORT AND IN A SITUATION WHEREIT IS CLEAR THAT:

1. HUMAN LIFE AND PROPERTY ARE ENDANGERED.

2. THERE IS NO HOPE CONTROLLING THE BLOWOUT UNDER THE PREVAILING CONDITIONS AT THE WELL.

NOTIFY THE DISTRICT OFFICE IF TIME PERMITS,
BUT DO NOT DELAY IF HUMAN LIFE IS IN DANGER.

INITIATE EVACUATION PLAN.

IGNITION PROCEDURES

INSTRUCTIONS FOR IGNITING THE WELL

1. TWO PEOPLE ARE REQUIRED FOR THE ACTUAL IGNITING OPERATION. THEY MUST WEAR SELF-CONTAINED BREATHING APPARATUS (SCBA) UNITS AND HAVE SAFETY ROPE ATTACHED. ONE MAN (TOOL PUSHER OR SAFETY ENGINEER) WILL CHECK THE ATMOSPHERE FOR EXPLOSIVE GASES WITH THE EXPLOSIMETER. THE OTHER MAN (DRILLING FOREMAN) IS RESPONSIBLE FOR IGNITING THE WELL.

2. PRIMARY METHOD TO IGNITE: 25 MM FLARE GUN WITH RANGE OF APPROXIMATELY 500 FEET.

3. IGNITE UP WIND AND DO NOT APPROACH ANY CLOSER THAN IS WARRANTED.

4. SELECT THE IGNITION SITE BEST FOR PROTECTION, AND WHICH OFFERS AN EASY ESCAPE ROUTE.

5. BEFORE FIRING, CHECK FOR PRESENCE OF COMBUSTIBLE GAS.

6. AFTER LIGHTING, CONTINUE EMERGENCY ACTION AND PROCEDURE AS BEFORE.

7. ALL UNASSIGNED PERSONNEL WILL LIMIT THEIR ACTIONS TO THOSE DIRECTED BY THE DRILLING FOREMAN.

REMEMBER: AFTER WELL IS IGNITED, BURNING HYDROGEN SULFIDE WILL CONVERT TO SULFUR DIOXIDE, WHICH IS ALSO HIGHLY TOXIC. DO NOT ASSUME THE AREA IS SAFE AFTER THE WELL IS IGNITED.

4. HIGH RISK / EMERGENCY EQUIPMENT REQUIREMENTS

A. SIGNS

1. ONE SIGN LOCATED AT LOCATION ENTRANCE WITH THE FOLLOWING LANGUAGE:

(LEASE) CAUTION - POTENTIAL POISON GAS HYDROGEN SULFIDE
NO ADMITTANCE WITHOUT AUTHORIZATION

B. WINDSOCK- WIND STREAMERS

1. ONE 36" (IN LENGTH) WINDSOCK LOCATED AT PROTECTION CENTER, AT HEIGHT VISIBLE FROM RIG FLOOR.

2. ONE 36" (IN LENGTH) WINDSOCK LOCATED AT HEIGHT VISIBLE FROM PIT AREAS.

C. HYDROGEN SULFIDE DETECTOR AND ALARMS

1. H2S MONITORS WITH ALARMS WILL BE LOCATED ON THE RIG FLOOR, AT THE BELL NIPPLE, AND AT THE FLOW LINE. ***THESE MONITORS WILL BE SET TO ALARM AT 15 PPM WITH RED LIGHT, AND TO ALARM AT 20 PPM WITH RED LIGHT AND AUDIBLE ALARM.***

2. HAND OPERATED DETECTORS WITH TUBES.

3. H2S MONITOR TESTER.

D. CONDITION FLAGS

1. ONE EACH OF ORANGE, YELLOW, AND RED CONDITION FLAGS TO BE DISPLAYED TO DENOTE CONDITIONS:

GREEN - NORMAL CONDITIONS
YELLOW - POTENTIAL DANGER
RED - DANGER, H2S PRESENT

2. CONDITION FLAG SHALL BE POSTED AT LOCATION SIGN ENTRANCE.

E. AUXILIARY RESCUE EQUIPMENT

1. STRETCHER

2. 100' LENGTH OF 5/8" NYLON ROPE.

F. MUD INSPECTION DEVICES - GARRETT GAS TRAIN OR HACH TESTER FOR INSPECTION OF SULFIDE CONCENTRATION IN MUD SYSTEM.

G. FIRE EXTINGUISHER - ADEQUATE FIRE EXTINGUISHERS SHALL BE LOCATED AT STRATEGIC LOCATIONS.

H. BLOW OUT PREVENTION EQUIPMENT - THE WELL SHALL HAVE HYDRAULIC BOP EQUIPMENT FOR THE ANTICIPATED BOTTOM HOLE PRESSURE. EQUIPMENT IS TO BE TESTED ON INSTALLATION.

I. COMBUSTIBLE GAS DETECTOR - THERE SHALL BE ONE COMBUSTIBLE GAS DETECTOR ON LOCATION AT ALL TIMES.

J. BOP TESTING - BOP AND CHOKE LINE AND KILL LINE WILL BE TESTED.

K. AUDIO SYSTEM - RADIO COMMUNICATION WILL BE AVAILABLE AT THE ***RIG, RIG FLOOR*** OR ***TRAILER*** AND ***VEHICLES***.

L. SPECIAL CONTROL EQUIPMENT - MAKE SURE OF HYDRAULIC BOP EQUIPMENT WITH REMOTE CONTROL ON GROUND AND ROTATING HEAD.

5. EMERGENCY TELEPHONE NUMBERS

(Revised August 2021)

CONTACT PARTY	OFFICE
PROBITY SWD, LLC	
G.A. BABER	**CELL: 575-318-7521**
MIDLAND OFFICE	**432-870-1122**
STEVE JETER	
STATE POLICE	
ROSWELL, NM	**575-827-9312**
EDDY COUNTY	**575-885-3138**
SHERIFF	
EDDY COUNTY	**575-887-7551**
LEA COUNTY	**575-396-3611**
EMERGENCY MEDICAL	
EDDY COUNTY	**911 OR 575-746-2701**
LEA COUNTY	**911 OR 575-394-3258**
EMERGENCY RESPONSE	
EDDY COUNTY	**575-746-9620**
LEA COUNTY	**575 396-8602**

CONTACT PARTY (cont.)	OFFICE
FIRE DEPARTMENTS	
ARTESIA	575-746-5051
CARLSBAD	575-682-5450
HOBBS	575-397-9308
EUNICE	575-394-3258
JAL FIRE DEPT.	575-395-2221
POLICE DEPARTMENTS	
ARTESIA	575-746-5000
CARLSBAD	575-885-2111
LOCO HILLS	575-677-2349
HOBBS	575-397-3365
EUNICE	575-394-0112
JAL	575-395-2501
CALLAWAY SAFETY EDDY & LEA COUNTIES	575-392-2973
WILD WELL CONTROL ODESSA, TX	OFFICE: 281-784-4700

6. SAFETY BRIEFING

SERVICE COMPANY AND VISITING PERSONNEL

A. EACH SERVICE COMPANY THAT WILL BE ON THIS WELL WILL BE NOTIFIED IF THE ZONE CONTAINS H2S.

B. EACH SERVICE COMPANY MUST PROVIDE FOR THE TRAINING AND EQUIPMENT OF THEIR EMPLOYEES BEFORE THEY ARRIVE AT THE WELL SITE.

C. EACH SERVICE COMPANY WILL BE EXPECTED TO ATTEND A SAFETY BRIEFING.

7. EVACUATION PLAN

GENERAL REQUIREMENTS

EVACUATION ROUTES SHOULD BE ESTABLISHED PRIOR TO SPUDDING EACH WELL AND DISCUSSED WITH ALL RIG PERSONNEL.

H_2S Contingency Plan (continued)

1. DESIGNATED AREA

A. PARKING AND VISITOR AREA: ALL VEHICLES ARE TO BE PARKED AT A PRE-DETERMINED AND SAFE DISTANCE FROM THE WELLHEAD. THIS WILL BE THE DESIGNATED SMOKING AREA.

B. TWO BRIEFING AREAS ON EITHER SIDE OF THE LOCATION AT THE MAXIMUM ALLOWABLE DISTANCE FROM THE WELL BORE SO THEY OFFSET PREVAILING WINDS PERPENDICULARLY, OR AT A 45-DEGREE ANGLE IF WIND DIRECTION TENDS TO SHIFT IN THE AREA.

C. IF A MOVABLE H2S SAFETY TRAILER IS USED, IT SHOULD BE DEPT UPWIND OF EXISTING WINDS. WHEN WIND IS FROM THE PREVAILING DIRECTIONS, BOTH PROTECTION CENTERS SHOULD BE ACCESSIBLE.

2. EVACUATION IMPLEMENTATION AND PUBLIC SAFETY

CONDITIONS ARE SUCH THAT A RELEASE MAY CREATE AN H2S CONCENTRATION OF MORE THAN 100 PPM IN A PUBLIC AREA, 500 PPM AT A PUBLIC ROAD OR 100 PPM 3000 FEET FROM THE SITE OF RELEASE.

TO PROTECT THE PUBLIC FROM HAZARDOUS GAS SITUATIONS ARE AS FOLLOWS:

(NOTE: REFER ALSO TO APPENDIX 'C', POTENTIALLY HAZARDOUS VOLUMES.)

1. WHEN THE COMPANY APPROVED SUPERVISOR (DESIGNATED PERSONNEL, I.E., DRILLING FOREMAN, CONSULTANT, RIG PUSHER, OR DRILLER) DETERMINES THE H2S GAS CANNOT BE LIMITED TO THE WELL LOCATION AND THE PUBLIC WILL BE INVOLVED, HE WILL ACTIVATE THE EVACUATION PLAN. ESCAPE ROUTES ARE NOTED ON AREA MAP.

2. COMPANY FOREMAN OR DESIGNATED PERSONNEL WILL NOTIFY LOCAL GOVERNMENT AGENCY THAT A HAZARDOUS CONDITION EXISTS AND EVACUATION NEEDS TO BE IMPLEMENTED.

3. COMPANY SAFETY PERSONNEL THAT HAVE BEEN TRAINED IN THE USE OF H2S DETECTION EQUIPMENT AND SELF-CONTAINED BREATHING EQUIPMENT WILL MONITOR H2S CONCENTRATIONS, WIND DIRECTIONS, AND AREA OF EXPOSURE. THEY WILL DELINEATE THE OUTER PERIMETER OF THE HAZARDOUS GAS AREA. EXTENSION TO THE EVACUATION AREA WILL BE DETERMINED FROM INFORMATION GATHERED.

4. LAW ENFORCEMENT PERSONNEL (STATE POLICE, POLICE DEPT., FIRE DEPT., AND SHERIFF'S DEPT.) WILL BE CALLED TO AID IN SETTING UP AND MAINTAINING ROAD BLOCKS. ALSO, THEY WILL AID IN EVACUATION OF THE PUBLIC IF NECESSARY.

IMPORTANT: LAW ENFORCEMENT PERSONNEL WILL NOT BE ASKED TO COME INTO A CONTAMINATED AREA. THEIR ASSISTANCE WILL BE LIMITED TO UNCONTAMINATED AREAS. CONSTANT RADIO CONTACT WILL BE MAINTAINED WITH THEM.

5. AFTER THE DISCHARGE OF GAS HAS BEEN CONTROLLED, COMPANY SAFETY PERSONNEL WILL DETERMINE WHEN THE AREA IS SAFE FOR RE-ENTRY.

FINAL WORD

IT IS THE RESPONSIBILITY OF EVERY CONTRACTOR EMPLOYED BY PROBITY SWD, LLC TO HAVE ALL THIER EMPLOYEES CERTIFIED IN H_2S SAFETY.

ALL PERSONNEL ON A PROBITY SWD, LLC SITE WILL BE REQUIRED TO HAVE ON THEIR PERSON (OR ON SITE) AN H_2S TRAINING CERTIFICATE CARD THAT IS VALID FOR THE CURRENT DATE.

IMPLEMENTATION OF THIS PLAN IS

A MATTER OF LIFE AND DEATH.

APPENDIX 'A'

TRAINING REQUIREMENTS

WHEN WORKING IN AN AREA WHERE ***ANY LEVEL*** OF HYDROGEN SULFIDE GAS (H2S) MIGHT BE ENCOUNTERED, DEFINITE TRAINING REQUIREMENTS MUST BE CARRIED OUT. ALL COMPANIES WILL INSURE THAT ALL PERSONNEL AT THE WELL SITE WILL HAVE HAD ADEQUATE TRAINING IN THE FOLLOWING:

1. HAZARDS AND CHARACTERISTICS OF H2S.
2. PHYSICAL EFFECTS OF HYDROGEN SULFIDE ON THE HUMAN BODY.
3. TOXICITY OF HYDROGEN SULFIDE AND SULFUR DIOXIDE.
4. H2S DETECTION.
5. EMERGENCY RESCUE.
6. RESUSCITATORS.
7. FIRST AID AND ARTIFICIAL RESPIRATION.
8. EFFECTS OF H2S ON METALS.
9. LOCATION SAFETY.

IT IS THE RESPONSIBILITY OF EVERY CONTRACTOR EMPLOYED BY PROBITY SWD, LLC TO HAVE ALL THIER EMPLOYEES CERTIFIED IN H2S SAFETY.

ALL PERSONNEL ON A PROBITY SWD, LLC SITE WILL BE REQUIRED TO HAVE ON THEIR PERSON AN H2S TRAINING CERTIFICATE CARD THAT IS VALID FOR THE CURRENT DATE.

APPENDIX 'A' (continued)

FIRST AID FOR H2S POISONING

DO NOT PANIC - REMAIN CALM - THINK !

1. HOLD YOUR BREATH. (DO NOT INHALE FIRST - JUST STOP BREATHING.)

2. PUT ON BREATHING APPARATUS.

3. REMOVE VICTIM(S) TO FRESH AIR AS QUICKLY AS POSSIBLE. (GO UP-WIND FROM SOURCE OR AT RIGHT ANGLE TO THE WIND - NOT DOWNWIND.)

4. **YELL (!)** ***"SOMEONE CALL 911".***

5. BRIEFLY APPLY CHEST PRESSURE - ARM LIFT METHOD OF ARTIFICIAL RESPIRATION TO CLEAN THE VICTIM'S LUNGS AND TO AVOID INHALING ANY TOXIC GAS DIRECTLY FROM THE VICTIM'S LUNGS.

6. PROVIDE FOR PROMPT TRANSPORTATION TO THE HOSPITAL AND CONTINUE GIVING ARTIFICIAL RESPIRATION IF NEEDED.

7. HOSPITAL(S) OR MEDICAL FACILITIES NEED TO BE INFORMED, BEFORE-HAND, OF THE POSSIBILITY OF H2S GAS POISONING - NO MATTER HOW REMOTE THE POSSIBILITY IS.

8. NOTIFY EMERGENCY ROOM PERSONNEL THAT THE VICTIM(S) HAS BEEN EXPOSED TO H2S GAS.

BESIDES BASIC FIRST AID, EVERYONE ON LOCATION SHOULD HAVE A GOOD WORKING KNOWLEDGE OF ARTIFICIAL RESPIRATION, AS WELL AS FIRST AID FOR EYES AND SKIN CONTACT WITH LIQUID H2S.

EVERYONE NEEDS TO MASTER THESE NECESSARY SKILLS.

APPENDIX 'B'

STATUS CHECK LIST

APPLICABLE TO ALL OPERATIONS WHEN LEVELS ARE EXPECTED THAT APPROACH OR ARE ABOVE 100 PPM H2S.

NOTE: ALL ITEMS ON THIS LIST MUST BE COMPLETED BEFORE DRILLING TO PRODUCTION CASING POINT.

1. SIGN AT LOCATION ENTRANCE.

2. TWO (2) WINDSOCKS LOCATED AS REQUIRED.

3. TWO (2) 30-MINUTE PRESSURE DEMAND AIR PACKS ON LOCATION FOR ALL RIG PERSONNEL AND MUD LOGGERS.

4. AIR PACK INSPECTED FOR READY USE.

5. CASCADE SYSTEM AND HOSE LINE HOOK-UP.

6. CASCADE SYSTEM FOR REFILLING AIR BOTTLES.

7. SAFE BREATHING AREAS SETUP.

8. CONDITION FLAG ON LOCATION AND READY FOR USE.

9. H2S DETECTION SYSTEM HOOKED UP.

10. H2S ALARM SYSTEM HOOKED UP AND READY.

11. OXYGEN RESUSCITATOR ON LOCATION AND TESTED FOR USE.

12. STRETCHER ON LOCATION AT SAFETY TRAILER.

13. 1 - 100' LENGTH OF NYLON ROPE ON LOCATION.

14. ALL RIG CREW AND SUPERVISORS TRAINED AS REQUIRED.

15. ALL OUTSIDE SERVICE CONTRACTORS ADVISED OF POTENTIAL H2S HAZARD ON WELL.

16. NO SMOKING SIGN POSTED.

17. HAND OPERATED H2S DETECTOR WITH TUBES ON LOCATION AND CHECKED BY DATE IS WITHIN CURRENT TIME FRAME.

APPENDIX 'B' (continued)

PROCEDURAL CHECK LIST

PERFORM DURING EACH TOUR:

1. CHECK FIRE EXTINGUISHERS TO SEE THAT THEY HAVE THE PROPER CHARGE.

2. CHECK BREATHING EQUIPMENT TO ENSURE THAT IT HAS NOT BEEN TAMPERED WITH.

3. MAKE SURE ALL THE H2S DETECTION SYSTEM IS OPERATIVE. PERFORM EACH WEEK:

4. CHECK EACH PIECE OF BREATHING EQUIPMENT TO MAKE SURE THAT DEMAND REGULATOR IS WORKING. THIS REQUIRES THAT THE BOTTLE BE OPENED AND THE MASK ASSEMBLY BE PUT ON TIGHT ENOUGH SO THAT WHEN YOU INHALE, YOU RECEIVE AIR.

5. BLOW OUT PREVENTER SKILLS ARE APPROPRIATELY COVERED BY CREW.

6. CHECK SUPPLY PRESSURE ON BOP ACCUMULATOR STAND BY SOURCE.

7. CHECK ALL SCBA UNITS FOR OPERATION:

DEMAND REGULATOR

ESCAPE BOTTLE AIR VOLUMES

SUPPLY BOTTLE OF AIR VOLUME

8. CHECK BREATHING EQUIPMENT MASK ASSEMBLY TO SEE THAT STRAPS ARE LOOSENED AND TURNED BACK, READY TO PUT ON.

9. CHECK PRESSURE ON BREATHING EQUIPMENT AIR BOTTLES TO MAKE SURE THEY ARE CHARGED TO FULL VOLUME.

10. CONFIRM PRESSURE ON ALL SUPPLY AIR BOTTLES.

11. PERFORM BREATHING EQUIPMENT DRILLS WITH ON-SITE PERSONNEL.

12. CHECK THE FOLLOWING FOR AVAILABILITY:

EMERGENCY TELEPHONE LIST

HAND OPERATED H2S DETECTORS AND TUBES

APPENDIX 'C'

GENERAL INFORMATION

TOXIC EFFECTS OF HYDROGEN SULFIDE

HYDROGEN SULFIDE IS EXTREMELY TOXIC. THE ACCEPTABLE CEILING CONCENTRATION FOR EIGHT-HOUR EXPOSURE IS 10 PPM, WHICH IS .001% BY VOLUME.

HYDROGEN SULFIDE IS HEAVIER THAN AIR (SPECIFIC GRAVITY - 1.192) AND COLORLESS. IT FORMS AN EXPLOSIVE MIXTURE WITH AIR BETWEEN 4.3 AND 46.0 PERCENT BY VOLUME.

HYDROGEN SULFIDE IS ALMOST AS TOXIC AS HYDROGEN CYANIDE AND IS BETWEEN FIVE AND SIX TIMES MORE TOXIC THAN CARBON MONOXIDE.

TOXICITY DATA FOR HYDROGEN SULFIDE AND VARIOUS OTHER GASES ARE COMPARED IN TABLE I.

PHYSICAL EFFECTS AT VARIOUS HYDROGEN SULFIDE EXPOSURE LEVELS ARE SHOWN IN TABLE II.

TABLE I

TOXICITY OF VARIOUS GASES

COMMON NAME	*CHEMICAL FORMULA*	*SPECIFIC GRAVITY*	*THRESHOLD LIMIT (1)*	*HAZARDOUS LIMIT (2)*	*LETHAL CONCENTRATION (3)*
HYDROGEN SULFIDE	**H2S**	**1.19**	**10 PPM**	**100 PPM/HR**	**600 PPM**
HYDROGEN CYANIDE	**HCN**	**0.94**	**10 PPM**	**150 PPM/HR**	**300 PPM**
SULFUR DIOXIDE	**SO2**	**2.21**	**2 PPM**	**N/A**	**1000 PPM**
CHLORINE	**CL2**	**2.45**	**1 PPM**	**150 PPM/HR**	**1000 PPM**
CARBON MONOXIDE	**CO**	**0.97**	**50 PPM**	**150 PPM/HR**	**1000 PPM**
CARBON DIOXIDE	**CO2**	**1.52**	**5000 PPM**	**5%**	**10%**
METHANE	**CH4**	**0.55**	**90,000 PPM**	**COMBUSTIBLE @ 5% IN AIR**	**N/A**

(1) THRESHOLD LIMIT - CONCENTRATION AT WHICH IT IS BELIEVED THAT ALL WORKERS MAY BE REPEATEDLY EXPOSED DAY AFTER DAY WITHOUT ADVERSE EFFECTS.

(2) HAZARDOUS LIMIT - CONCENTRATION THAT MAY CAUSE DEATH WITH PROLONGED EXPOSURE.

(3) LETHAL CONCENTRATION - CONCENTRATION THAT WILL CAUSE DEATH WITH SHORT-TERM EXPOSURE.

APPENDIX 'C' (continued)

TABLE II

PHYSICAL EFFECTS OF HYDROGEN SULFIDE

CONCENTRATION	*PHYSICAL EFFECTS*
0.001 or 10 PPM	**OBVIOUS AND UNPLEASANT ODOR. SAFE FOR 8 HOURS OF EXPOSURE.**
0.002 or 20 PPM	**MAY STING EYES AND THROAT. MAY CAUSE FLU-LIKE SYMPTOMS.**
0.010 or 100 PPM	**KILLS SMELL IN 3 - 15 MINUTES. STINGS EYES AND THROAT. MAY HAVE SOME DIZZINESS AFTER PROLONGED EXPOSURE.**
0.050 or 500 PPM	**DIZZINESS; BREATHING CEASES IN A FEW MINUTES; NEEDS PROMPT RESUSCITATION. MAY CAUSE LUNG DAMAGE OR DEATH AFTER 4 HOURS EXPOSURE.**
0.070 or 700 PPM	**UNCONSCIOUS QUICKLY; DEATH WILL RESULT IF NOT RESCUED PROMPTLY.**
0.100 or 1000 ppm	**UNCONSCIOUS AT ONCE; FOLLOWED BY DEATH WITHIN MINUTES.**

SCBA'S SHOULD BE WORN WHEN...

A. ANY EMPLOYEE WORKS NEAR THE TOP OR ON TOP OF ANY TANK UNLESS TESTS REVEAL LESS THAN 10 PPM OF H2S.

B. WHEN BREAKING OUT ANY LINE WHERE H2S CAN REASONABLY BE EXPECTED.

C. WHEN SAMPLING AIR IN AREAS TO DETERMINE IF TOXIC CONCENTRATIONS OF H2S EXISTS.

D. WHEN WORKING IN AREAS WHERE OVER 100 PPM H2S HAS BEEN DETECTED.

E. AT ANY TIME THERE IS A DOUBT AS TO THE H2S LEVEL IN THE AREA TO BE ENTERED.

APPENDIX 'C' (continued)

POTENTIALLY HAZARDOUS VOLUMES

THIS IS THE VOLUME OF H2S GAS OF SUCH CONCENTRATION THAT:

1. THE 100-PPM RADIUS OF EXPOSURE (1) INCLUDES A PUBLIC AREA (2);
2. THE 500-PPM RADIUS OF EXPOSURE INCLUDES A PUBLIC ROAD (3);
3. THE 100-PPM RADIUS OF EXPOSURE EXCEEDS 3000 FEET.

(1) RADIUS OF EXPOSURE MEANS THE RADIUS CONSTRUCTED WITH THE POINT OF ESCAPE AS ITS STARTING POINT AND ITS LENGTH.

(2) PUBLIC AREA IS A BUILDING OR STRUCTURE THAT IS NOT ASSOCIATED WITH THE WELL, FACILITY OR OPERATION FOR WHICH THE RADIUS OF EXPOSURE IS BEING CALCULATED AND THAT IS USED AS A DWELLING, OFFICE, PLACE OF BUSINESS, CHURCH, SCHOOL, HOSPITAL OR GOVERNMENT BUILDING, OR A PORTION OF A PARK, CITY, TOWN, VILLAGE OR DESIGNATED SCHOOL BUS STOP OR OTHER SIMILAR AREA WHERE MEMBERS OF THE PUBLIC MAY REASONABLY BE EXPECTED TO BE PRESENT.

(3) PUBLIC ROAD MEANS A FEDERAL, STATE, MUNICIPAL OR COUNTY ROAD OR HIGHWAY.

RADIUS OF EXPOSURE

THE RADIUS OF EXPOSURE IS CALCULATED USING THE FOLLOWING PASQUILL-GIFFORD DERIVED EQUATION (OR BY OTHER SUCH METHOD) AS FOLLOWS:

A. FOR DETERMINING THE 100-PPM RADIUS OF EXPOSURE:

$$X = [(1.589)(H2S\ CONCENTRATION)(Q)]^{(0.6258)}$$

WHERE "X" IS THE RADIUS OF EXPOSURE IN FEET, THE H2S CONCENTRATION IS THE DECIMAL EQUIVALENT OF THE MOLE OR VOLUME FRACTION OF H2S IN THE GASEOUS MIXTURE;

AND "Q" IS THE ESCAPE RATE EXPRESSED IN CUBIC FEET PER DAY (CORRECTED FOR STANDARD CONDITIONS OF 14.73 PSI ABSOLUTE AND 60 DEGREES FAHRENHEIT)

B. FOR DETERMINING THE 500-PPM RADIUS OF EXPOSURE:

$$X = [(0.4546)(H2S\ CONCENTRATION)(Q)]^{(0.6258)}$$

WHERE "X" IS THE RADIUS OF EXPOSURE IN FEET, THE H2S CONCENTRATION IS THE DECIMAL EQUIVALENT OF THE MOLE OR VOLUME FRACTION OF H2S IN THE GASEOUS MIXTURE;

AND "Q" IS THE ESCAPE RATE EXPRESSED IN CUBIC FEET PER DAY (CORRECTED FOR STANDARD CONDITIONS OF 14.73 PSI ABSOLUTE AND 60 DEGREES FAHRENHEIT)

C. FOR A WELL BEING DRILLED, COMPLETED, RECOMPLETED, WORKED OVER OR SERVICED IN AN AREA WHERE INSUFFICIENT DATA EXISTS TO CALCULATE A RADIUS OF EXPOSURE BUT WHERE H2S COULD REASONABLY BE EXPECTED TO BE PRESENT IN CONCENTRATIONS IN EXCESS OF 100 PPM IN THE GASEOUS MIXTURE, A 100 PPM RADIUS OF EXPOSURE EQUAL TO 3000 FEET IS ASSUMED.

APPENDIX 'C' (continued)

REGULATORY THRESHOLD

A. DETERMINATION OF H2S CONCENTRATION

1. THE H2S CONCENTRATION IN THE GASEOUS MIXTURE WITHIN WELLS, FACILITIES OR OPERATIONS SHALL BE DETERMINED EITHER BY TESTING, TESTING A REPRESENTATIVE SAMPLE OR USING PROCESS KNOWLEDGE IN LIEU OF TESTING. IF THE PERSON USES A REPRESENTATIVE SAMPLE OR PROCESS KNOWLEDGE, THE CONCENTRATION DERIVED FROM THE REPRESENTATIVE SAMPLE OR PROCESS KNOWLEDGE SHALL BE REASONABLY REPRESENTATIVE OF THE H2S CONCENTRATION WITHIN THE WELL OR FACILITY.

2. THE TESTS USED TO MAKE THE DETERMINATION SHALL BE CONDUCTED IN ACCORDANCE WITH APPLICABLE ASTM OR GPA STANDARDS OR BY STANDARDLY ACCEPTED METHOD.

3. IF A CHANGE OR ALTERATION MAY MATERIALLY INCREASE THE H2S CONCENTRATION IN A WELL, FACILITY OR OPERATION, TESTING SHALL BE CONDUCTED TO MAKE A NEW DETERMINATION.

B. CONCENTRATIONS DETERMINED TO BE BELOW 100 PPM - IF THE H2S CONCENTRATION IN A GIVEN WELL, FACILITY OR OPERATION IS LESS THAN 100 PPM, NO FURTHER ACTIONS SHALL BE REQUIRED ***EXCEPT AS PROVIDED IN THIS H2S CONTINGENCY PLAN CONCERNING "NORMAL / LOW H2S CONDITIONS".***

C. CONCENTRATIONS DETERMINED TO BE ABOVE 100 PPM

1. IF THE H2S CONCENTRATION IN A GIVEN WELL, FACILITY OR OPERATION IS DETERMINED TO BE 100 PPM OR GREATER, THEN THE RADIUS OF EXPOSURE SHALL BE CALCULATED TO COMPLY WITH APPLICABLE REQUIREMENTS OF STATE AND FEDERAL LAW.

2. IF CALCULATION OF THE RADIUS OF EXPOSURE REVEALS THAT A POTENTIALLY HAZARDOUS VOLUME IS PRESENT, THE RESULTS OFTHE H2S CONCENTRATION DETERMINATION AND THE CALCULATION OF THE RADIUS OF EXPOSURE SHALL BE PROVIDED TO NMOCD AND BLM. FOR A WELL, FACILITY OR OPERATION, THE ACCOMPLISH THE DETERMINATIONS, CALCULATIONS AND SUBMISSIONS WILL BE MADE BEFORE OPERATIONS BEGIN.

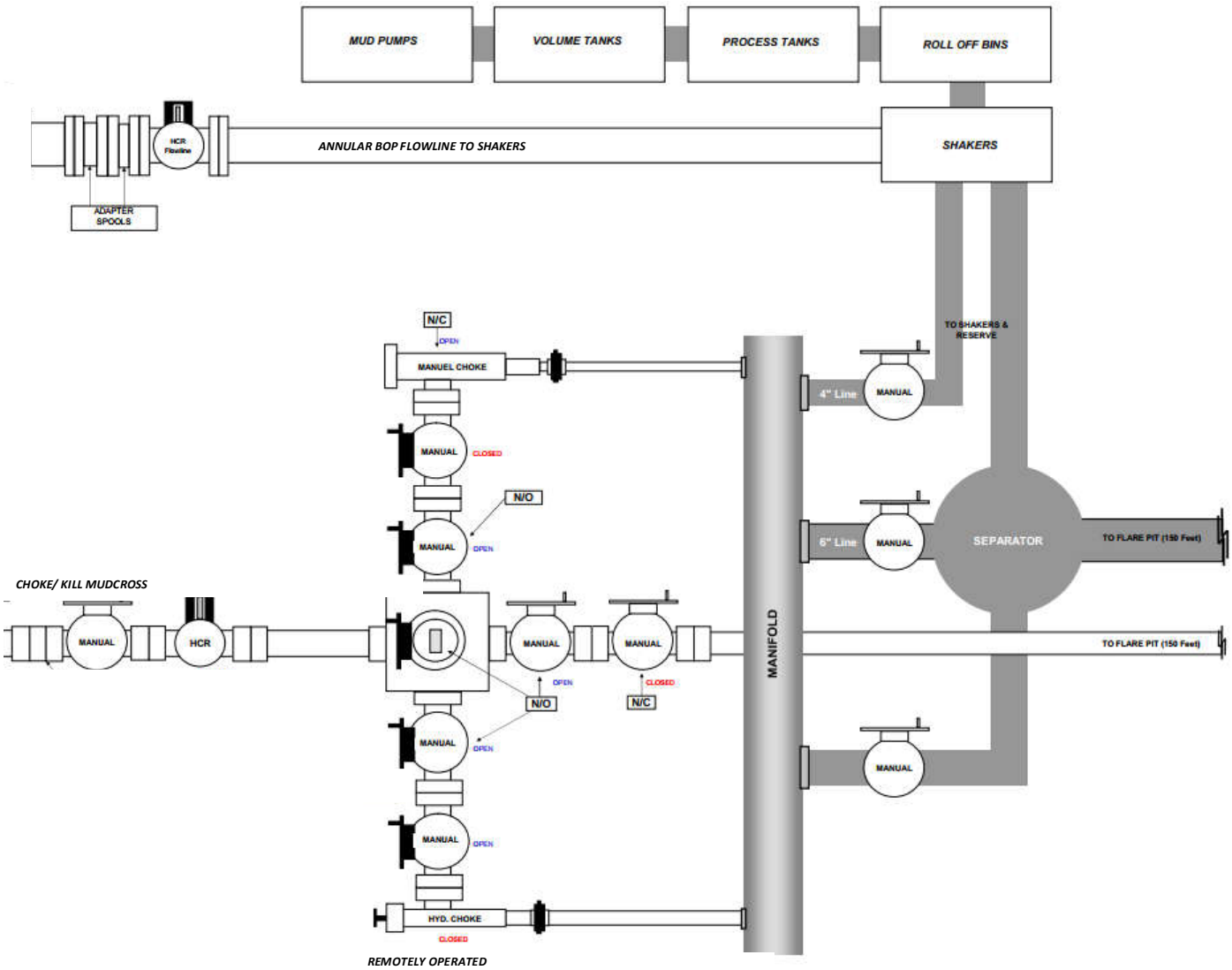
D. RECALCULATION - OF THE RADIUS OF EXPOSURE SHALL BE PERFORMED IF:

1. THE H2S CONCENTRATION IN A WELL, FACILITY OR OPERATION INCREASES TO 100 PPM OR GREATER.

2. THE CONCENTRATION OF H2S INCREASES BY A FACTOR OF 25% IN AN AREA THAT PREVIOUSLY HAD A H2S CONCENTRATION OF 100 PPM OR GREATER.

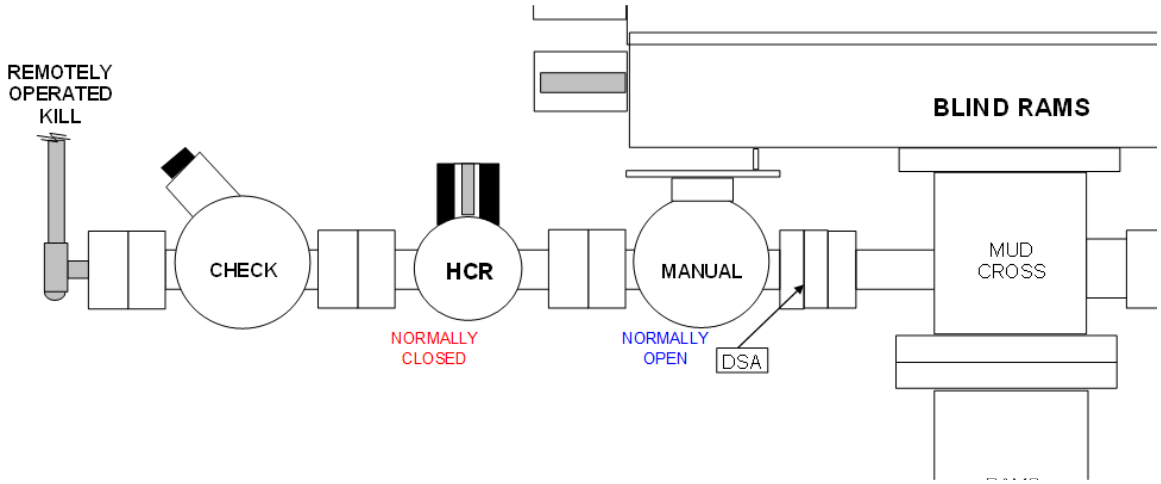
IF A POTENTIALLY HAZARDOUS VOLUME IS PRESENT, THE RESULTS SHALL BE PROVIDED TO THE NMOCD AND BLM WITHIN 60 DAYS.

McVay Rig #2
10M Choke Assembly/ Closed Loop
Probity - Mac Brant East SWD #1



McVay Rig #2
Remote Kill Line Side/ Closed Loop
Probity - Mac Brant East SWD #1

All kill line equipment and hose certifications and tests will be submitted via sundry when rig is assigned.



SOS Consulting, LLC
Oil & Gas Accounting - Regulatory Processing Assistance - Oil Field Technical Assistance
13 Years of Quality Service

February 9, 2021

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

VIA EMAIL

Attn: Mr. Phillip Goetze, UIC Manager

Re: Request to Extend Expiration Date for NMOCD Permit SWD-1874 and the corresponding APD pertaining to Probity SWD, LLC's Mac-Brant East SWD No.1, (API No.30-025-45670) located in Section 23, T24S-R29E, NMPM, Eddy County, New Mexico.

Dear Mr. Goetze,

Probity SWD, LLC maintains its intent to drill and complete the subject salt water disposal well.

Probity contacted me in early mid-January to work on extending the subject permit. I had the SWD expiration date in mind for my work scheduling and failed to notice that the APD was actually set to expire on January 29th. This was a simple oversight on my part, and I would implore OCD to please honor Probity's intent to extend the APD date by one year. As of this letter, I missed the required date by 6 business days.

Beyond that, we all continue to struggle with the effects of the pandemic in our personal lives and business dealings. Undoubtedly, this is the biggest reason for various delays and impact to the industry which necessitate this request.

I have reviewed the subject Area of Review and determined that no impactful changes have taken place however, the new AOR map does reveal an additional well spot. A quick check of the well file indicates that this well did indeed exist even before the C-108 for Probity's SWD was filed. For whatever reason, the well just wasn't displaying in the GIS. I've included both AOR maps for reference. Further, the well is operated by Oxy, USA which was notified during the original application process. Other than this situation, there appear to be no changes to the area of review.

Probity is currently moving forward on its plans and as thing continue to recover, intends to complete this and other SWDs as business demands. We therefore request an appropriate extension of one year for the subject permit SWD-1874 as well as the APD.

If you or your staff has any questions, please do not hesitate to call or email me.

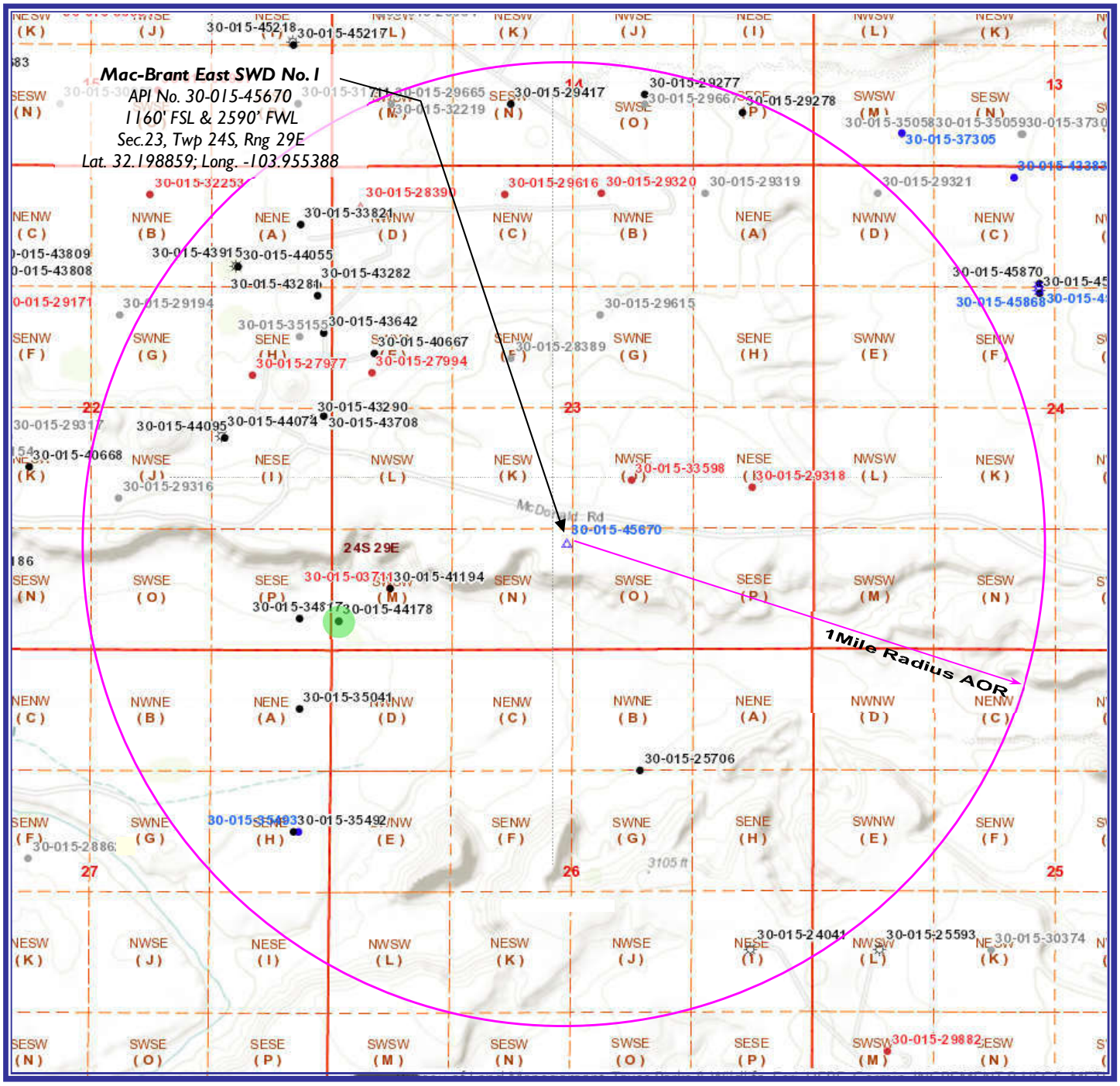
Best regards,

Ben Stone, SOS Consulting, LLC
Agent for Probity SWD, LLC
Attachments: AOR Map, Well info, Original AOR Map; SWD-1874; Cc: Project file

Mac-Brant East SWD Well No.1

One Mile Area of Review Map

February 2021



Request of Extension of Expiration Date for Probity's SWD-1874

A review of the AOR indicates there are no substantial changes in wells or ownership and no material changes are proposed for the well.

One additional well spot shows – well information on next page.

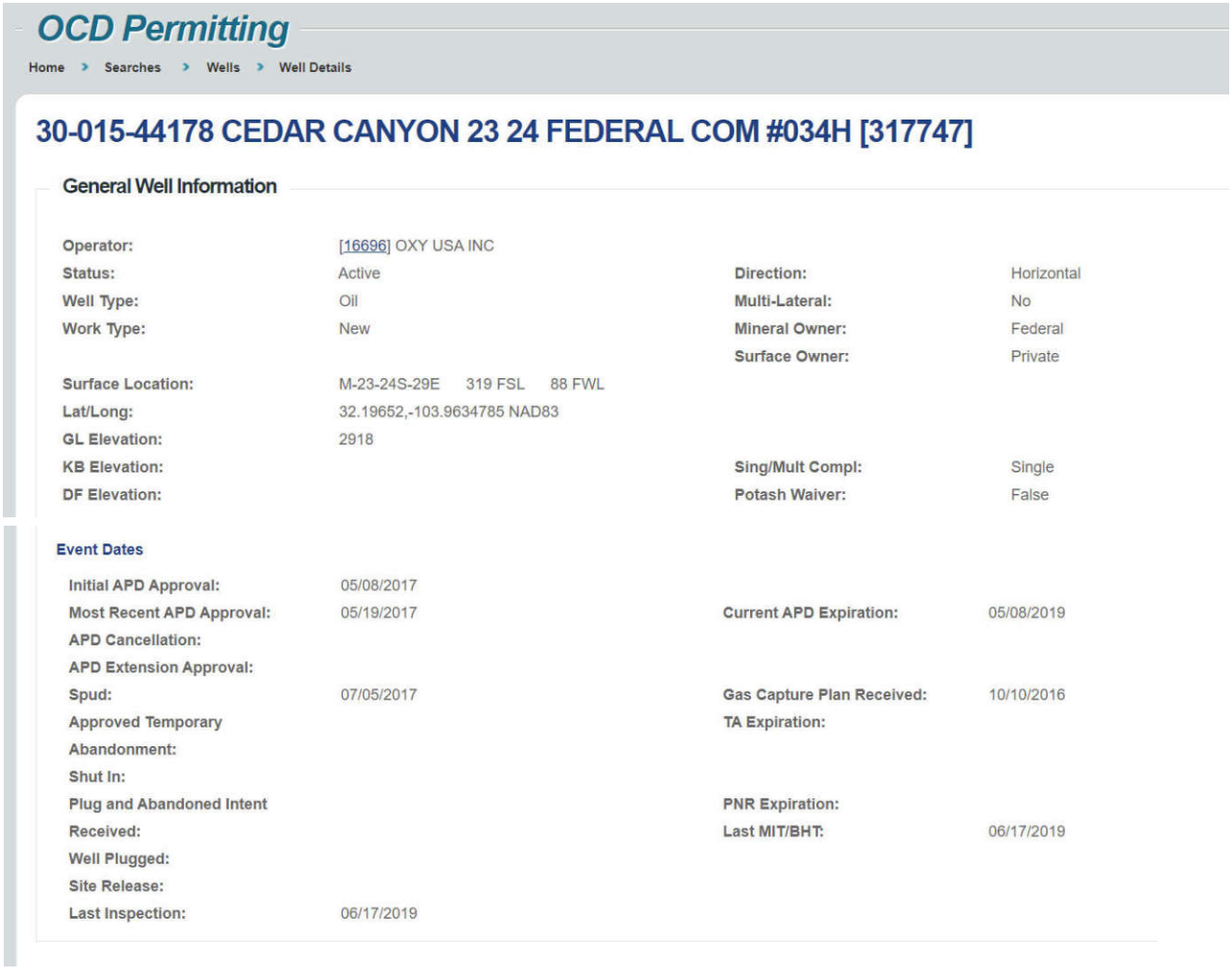
Probity SWD, LLC

Additional Well Spot in AOR

This well did not show in previous review in March 2020 for SWD permit extension. When revealed in the current review on February 9, 2021, the well record shows the well was spud in July 2017 and completed August 31, 2017.

This well was apparently existing when Probity's C-108 for its Mac-Brant East SWD was filed and approved. For whatever reason, the well spot was not part of the GIS well data layer and was therefore, inadvertently missed until now.

Oxy, USA was notified as part of the application process, so the information indicates that this well is not new but missed during the initial application process.



OCD Permitting

Home > Searches > Wells > Well Details

30-015-44178 CEDAR CANYON 23 24 FEDERAL COM #034H [317747]

General Well Information

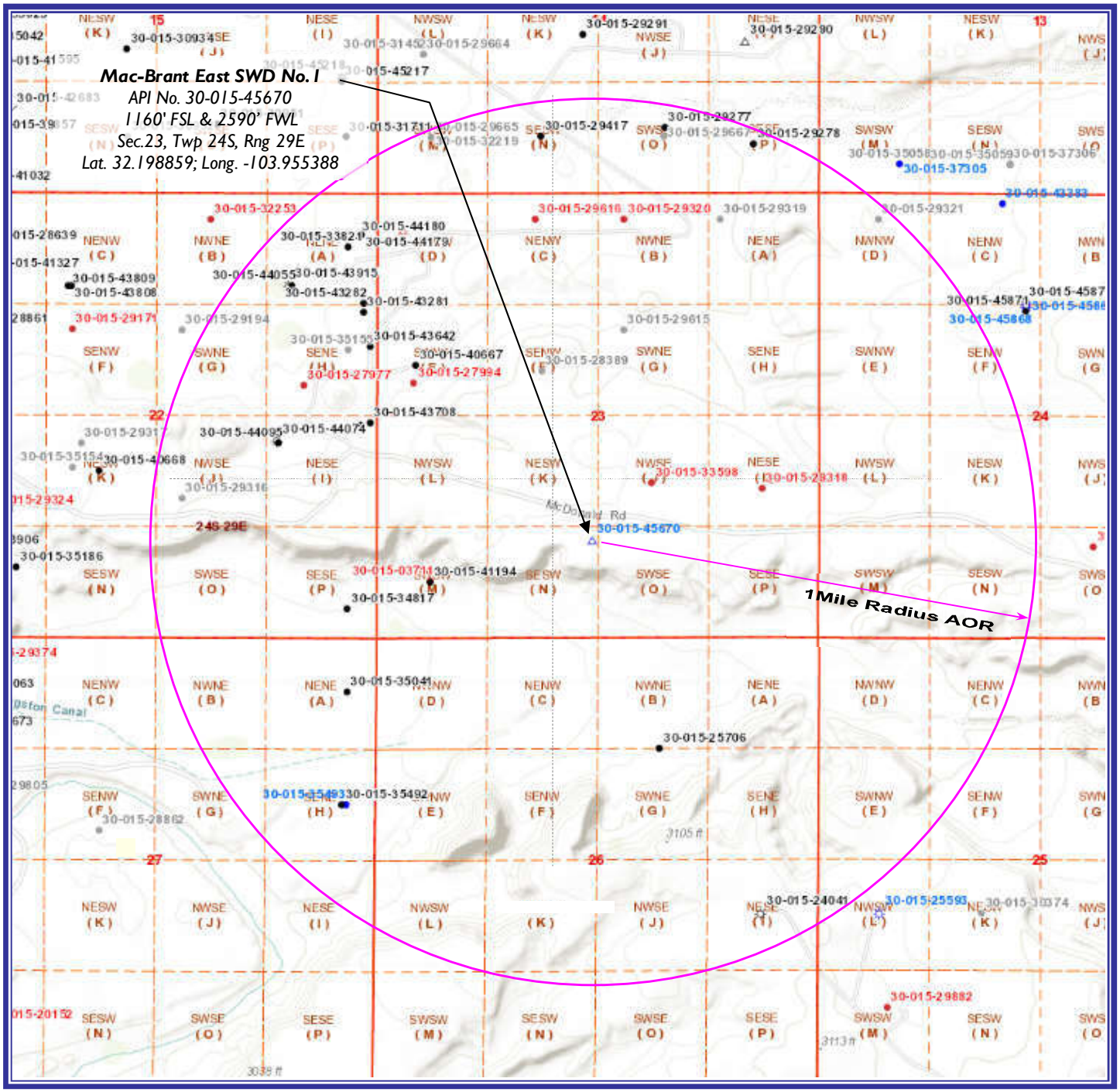
Operator:	[16696] OXY USA INC		
Status:	Active	Direction:	Horizontal
Well Type:	Oil	Multi-Lateral:	No
Work Type:	New	Mineral Owner:	Federal
		Surface Owner:	Private
Surface Location:	M-23-24S-29E 319 FSL 88 FWL		
Lat/Long:	32.19652,-103.9634785 NAD83		
GL Elevation:	2918		
KB Elevation:		Sing/Mult Compl:	Single
DF Elevation:		Potash Waiver:	False

Event Dates

Initial APD Approval:	05/08/2017		
Most Recent APD Approval:	05/19/2017	Current APD Expiration:	05/08/2019
APD Cancellation:			
APD Extension Approval:			
Spud:	07/05/2017	Gas Capture Plan Received:	10/10/2016
Approved Temporary Abandonment:		TA Expiration:	
Shut In:			
Plug and Abandoned Intent Received:		PNR Expiration:	
		Last MIT/BHT:	06/17/2019
Well Plugged:			
Site Release:			
Last Inspection:	06/17/2019		

Mac-Brant East SWD Well No.1

One Mile Area of Review Map



Request of Extension of Expiration Date for Probity's SWD-1874

A review of the AOR indicates there are no substantial changes in wells or ownership and no material changes are proposed for the well.

Probity SWD, LLC

State of New Mexico
Energy, Minerals and Natural Resources Department

March 27, 2020

Probity SWD, LLC (OGRID 296278)
c/o Stuart Doss
E-mail contact: stuart@probityswd.com

RE: **Administrative Order SWD-1874; Extension of Deadline to Inject**
Well: Mac Brant East SWD Well No. 1 (API 30-015-45670)
Located: Unit N, Sec 23, T24S, R29E, NMPM, Eddy County, New Mexico
Order Date: March 12, 2019
Injection formations: Devonian formation; 15,000 feet to 16,500 feet

Dear Mr. Doss:

Reference is made to your March 11, 2020 request on behalf of Probity SWD, LLC (the "operator") to extend the deadline stipulated in the above titled order to commence injection for the above referenced well for reasons outlined in your correspondence. The current deadline date to commence injection under said order is one year after issuance of the order: March 12, 2020.

It is the Division's understanding from your correspondence that since the date of issuance of this permit, no additional wells that penetrate the approved injection interval were drilled in the one-mile Area of Review (AOR). Additionally, no new affected parties have been identified in the AOR. Therefore, the extension request could be reviewed administratively for approval.

The Division finds that for reasons you have stated, the granting of this request to extend this administrative order is in the interest of conservation, will prevent waste, and will protect the environment. Therefore, the deadline to commence injection for the existing order is hereby extended until **March 12, 2021**.

All requirements of the above referenced administrative order and agreements in the application remain in full force and effect. Any additional extension of the deadline to commence injection for this administrative order will not be considered unless the operator has already commenced drilling of the referenced well. Otherwise, the injection authority shall expire under the terms of the extended administrative order and the operator shall be required to submit a new application to obtain injection authority for the referenced well.

ADRIENNE SANDOVAL
Director

AS/bl
cc: Bureau of Land Management -Carlsbad Field Office
Oil Conservation Division – Artesia District Office
Order SWD-1874

State of New Mexico
Energy, Minerals and Natural Resources Department

Administrative Order SWD-1874
March 12, 2019

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Pursuant to the provisions of Division Rule 19.15.26.8(B) NMAC, Probity SWD, LLC (the "operator") seeks an administrative order for its Mac Brant East SWD Well No. 1 (the "proposed well") with a location of 1160 feet from the South line and 2590 feet from the West line, (Unit letter N) of Section 23, Township 24 South, Range 29 East, NMPM, Eddy County, New Mexico, for the purpose of commercial disposal of produced water.

THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of Division Rule 19.15.26.8(B) NMAC and satisfactory information has been provided that affected parties have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in Division Rule 19.15.26.8 NMAC have been met and the operator is in compliance with Division Rule 19.15.5.9 NMAC.

Application for Disposal in Devonian and Silurian Formations: Due to the potential for the projected injection volume of the proposed well to impact an area greater than the one-half mile radius applied in Division Form C-108 and Division rule, the applicant has provided an expanded Area of Review for wells penetrating the disposal interval for a radius of one mile from the surface location of the proposed well.

IT IS THEREFORE ORDERED THAT:

The applicant, Probity SWD, LLC (OGRID 296278), is hereby authorized to utilize its Mac Brant East SWD Well No. 1 (API 30-015-45670) with a location of 1160 feet from the South line and 2590 feet from the West line, (Unit letter N) of Section 23, Township 24 South, Range 29 East, NMPM, Eddy County, for disposal of oil field produced water (UIC Class II only) through open-hole completion into an interval consisting of the Devonian and Silurian formations from approximately 15000 feet to approximately 16500 feet. Injection will occur through either an internally-coated, 5-$^{1/2}$-inch or smaller tubing inside the surface and intermediate casings, and a 5-inch or smaller tubing inside the liner (39 pound per foot or less). Further, a packer shall be set within 100 feet of the disposal interval. This permit does not allow disposal into:

1. The Woodford Shale and formations above the lower contact of the Woodford Shale;

2. Formations below the Silurian formations including the Montoya formation and the Ellenburger formation (lower Ordovician); and
3. Any lost circulation intervals directly on top and obviously connected to these formations.

Prior to commencing disposal, the operator shall submit mudlog and geophysical logs information, to the Division's District geologist and Santa Fe Engineering Bureau, showing evidence agreeable that only the permitted formation is open for disposal including a summary of depths (picks) for contacts of the formations which the Division shall use to amend this order for a final description of the depth for the injection interval. If significant hydrocarbon shows occur while drilling, the operator shall notify the Division's District II and the operator shall be required to receive written permission prior to commencing disposal.

The operator shall circulate to surface the cement for the surface and intermediate casings.

If cement does not circulate on any casing string, the operator shall run a cement bond log (CBL) or other log to determine top of cement and shall notify the Artesia District with the top of cement on the emergency phone number prior to continuing with any further cement activity with the proposed well. If cement did not tie back in to next higher casing shoe, the operator shall perform remedial cement action to bring cement, at a minimum, 200 feet above the next higher casing shoe.

The operator shall run a CBL (or equivalent) for the 7-5/8-inch liner to demonstrate placement cement and the cement bond with the tie-in with 9⅝-inch casing string. The operator shall provide a copy of the CBL to the Division's District II prior to commencing disposal.

Prior to commencing disposal, the operator shall obtain a bottom-hole pressure measurement representative of the open-hole completion. This information shall be provided with the written notice of the date of commencement of disposal.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the disposed water enters only the approved disposal interval and is not permitted to escape to other formations or onto the surface. This includes the completion and construction of the well as described in the application and, if necessary, as modified by the District Supervisor.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT procedures and schedules shall follow the requirements in Division Rule 19.15.26.11(A) NMAC. The Division Director retains the right to require at any time wireline verification of

completion and packer setting depths in this well.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's District II office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

If the disposal well fails a MIT or if there is evidence that the mechanical integrity of said well is impacting correlative rights, the public health, any underground sources of fresh water, or the environment, the Division Director shall require the well to be shut-in within 24 hours of discovery and the operator shall redirect all disposal waters to another facility. The operator shall take the necessary actions to address the impacts resulting from the mechanical integrity issues in accordance with Division Rule 19.15.26.10 NMAC, and the well shall be tested pursuant to Rule 19.15.26.11 NMAC prior to returning to injection.

The wellhead injection pressure on the well shall be limited to **no more than 3000 psi.** In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formations. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable step-rate test.

The operator shall notify the supervisor of the Division's District II office of the date and time of the installation of disposal equipment and of any MIT so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's District II office. The operator shall submit monthly reports of the disposal operations that includes number of days of operation, injection volume, and injection pressure on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

The injection authority granted under this order is not transferable except upon Division approval. The Division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The Division may revoke this injection order after notice and hearing if the operator is in violation of Rule 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate one (1) year after the effective date of this Order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this Order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.

GABRIEL WADE
Acting Director

GW/mam

cc: Bureau of Land Management – Carlsbad Field Office
Oil Conservation Division – Artesia District Office
Well File - 30-015-45670

Attachment: C-108 well completion diagram

Probity SWD, LLC

Mac Brant East SWD Well No.1
1160' FSL & 2590' FWL
Section 23, Twp 24-S, Rng 29-E
Eddy County, New Mexico

Well Program - New Drill

Objective: Drill new well for commercial salt water disposal into the Devonian and Silurian; mudlogging and e-logging to determine final depths.

1. **Geologic Information** - Devonian Formation

The Devonian and Silurian both consist of carbonates including light colored dolomite and chert intervals interspersed with some tight limestone intervals. Several thick sections of porous dolomite capable of taking water are present within the subject formations in the area. Depth control data was inferred from deep wells to the north, south and east. If the base of Devonian and top of Silurian and/or Ordovician rocks come in as expected the well will only be drilled deep enough for adequate logging rathole.

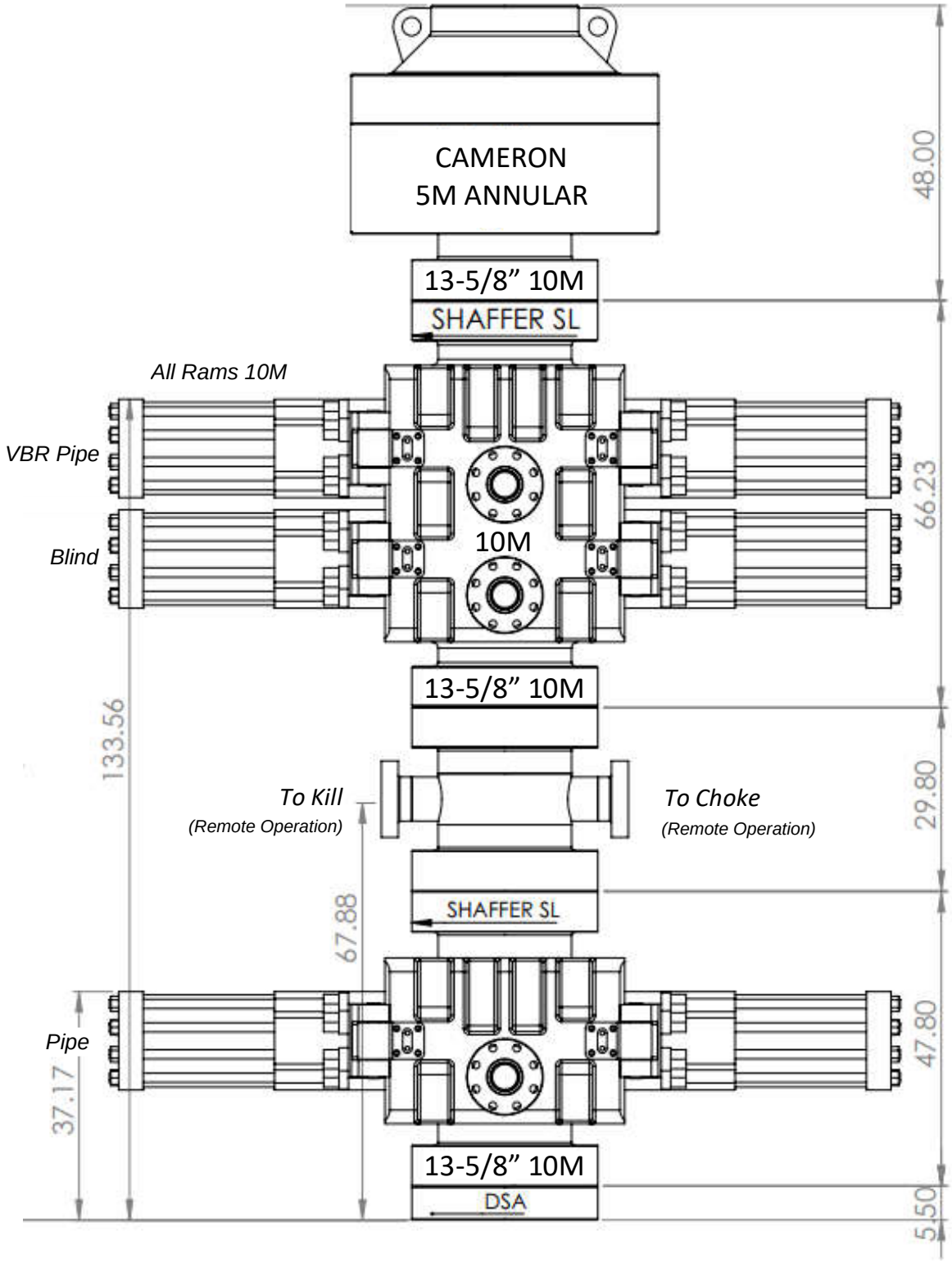
Estimated Formation Tops:

B/Fresh Water	250'
Salado	275'
B/Salt	2750'
Delaware Sand	3000'
Bone Spring	6700'
Wolfcamp	10000'
Strawn	12100'
Morrow	12950'
Woodford Shale	14800'
Devonian	15000'
Fusselman	16250'
Total Depth	16500'
Ellenburger (est.)	17300'

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. (R360, Eddy County or 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.
g. Sundry forms filed as needed - casing, cement, etc. - operations continue to completion.

McVay Rig #2
Full Stack 10M
Probity - Mac Brant East SWD #1



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Action 62979

COMMENTS

Operator: PROBITY SWD, LLC P.O. Box 7307 Midland, TX 79708	OGRID: 296278
	Action Number: 62979
	Action Type: [C-101] Drilling Non-Federal/Indian (APD)

COMMENTS

Created By	Comment	Comment Date
kpickford	SWD-1874	9/21/2022

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 62979

CONDITIONS

Operator: PROBITY SWD, LLC P.O. Box 7307 Midland, TX 79708	OGRID: 296278
	Action Number: 62979
	Action Type: [C-101] Drilling Non-Federal/Indian (APD)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Notify OCD 24 hours prior to casing & cement	9/21/2022
kpickford	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	9/21/2022
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	9/21/2022
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud	9/21/2022