<u>District I</u> 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

1220 S. St Francis Dr., Santa Fe, NM 87505

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

Form C-101 August 1, 2011

Permit 324473

	ame and Address			RMIT TO DRILL, RE	•		· ·	2. OGRID N	Number	
	scosa Energy Partr	ers, L.L.C							329748	
	1 W. Missouri Ave dland. TX 79701							3. API Num	nber 30-015-4993	8
1. Property Co	,	5. P	roperty Name					6. Well No.		
	3247		LeMans	19 24 State Com				;	305H	
				7. Sur	face Location					
JL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From		W Line	County
M	24	20S	:	26E	1097	S	:	297	W	Eddy
				8. Proposed I	Bottom Hole Locati	ion				
JL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From		/W Line	County
Р	19	20S	2	7E P	1320		5	100	E	Eddy
				9. Po	ol Information					
avalon; Bo	ONE SPRING							96381		
				Additiona	I Well Information					
11. Work Type		12. Well Type		13. Cable/Rotary				. Ground Level Elevation		
		OIL				State		3292		
16. Multiple 17. Propose				18. Formation		19. Contractor 20		0. Spud Date 10/3/2022		
N Depth to Ground water		1768	l .	Bone Sprin Distance from nearest from		water well Dis			2022 est surface wate	r
Deptit to Ground water				Distance from flearest in	ssii watei weli				or surface wate	•
We will be	using a closed-loc	p system in lieu o	f lined pits	1			<u>'</u>			
				21 Proposed Cas	ing and Cement P	rogram				
Туре	Hole Size	Casing Size	е	Casing Weight/ft	Setting I		Sacks of	Cement		Estimated TOC
Surf	17.5	13.375		48	500		63			0
	12.25	9.625		36	250	_	98		_	0
Int1	8.5	5.5		20	1/68	17681 3299 0				0
Int1 Prod				Casing/Cement Prog	gram: Additional C	omments				
				22. Proposed Blo	wout Prevention P	rogram				
	Туре		Working Pro	essure	wout Prevention P	Test Pressure			Manufa	
Prod	Annular		5000	essure )	wout Prevention P	Test Pressure 5000			C <sup>-</sup>	TI
Prod	Annular Blind		5000 5000	essure )	wout Prevention P	Test Pressure 5000 5000			C_	TI TI
Prod	Annular		5000	essure )	wout Prevention P	Test Pressure 5000			C <sup>-</sup>	TI TI

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.  I further certify I have complied with 19.15.14.9 (A) NMAC and/or 19.15.14.9 (B) NMAC X, if applicable.  Signature:				OIL CONSERVATIO	on division	
Printed Name:	Electronically filed by Kelly M Ha	ardy	Approved By:	Katherine Pickford		
Title:	Land Manager		Title:	Geoscientist		
Email Address:	khardy@tascosaep.com		Approved Date:	9/1/2022	Expiration Date: 9/1/2024	
Date:	9/1/2022	Phone: 432-695-6970	Conditions of Appr	roval Attached		

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 Rond, Aztec, NM 87410

Phone: (505) 334-6170 Fax: (505) 334-6170

1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

District IV

# State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr.

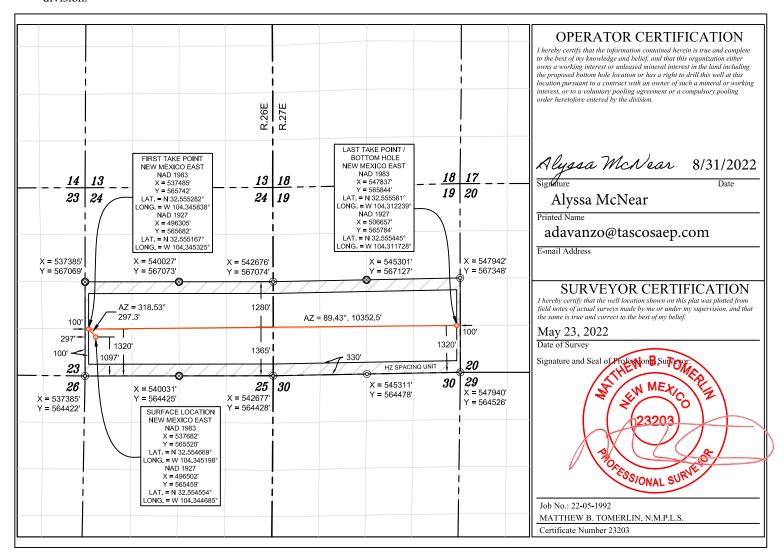
Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

☐ AMENDED REPORT

### Santa Fe, NM 87505

		W.	ELL LOC	ATION	AND ACRE	AGE DEDICA	ATION PLAT	1		
	Number			Pool Code Pool Name						
30-015- <b>4</b>	9938			96381		AVA	ALON; BONE SP	RING		
Property C 333247	ode			Property Name LE MANS 2419 STATE COM					Well Number #305H	
ogrid n <b>32974</b> 8				TASCOSA	Operator Name ENERGY PAR		Elevation 3292'			
	Surface Location									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
M	24	20 S	26 E		1097	SOUTH	WEST	EDDY		
	Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	from the North/South line Feet from the			County	
Р	19	20 S	27 E		1320	SOUTH	EAST	EDDY		
Dedicated Acres 640.15	Joint or	Infill	Consolidation Co	de O	rder 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



Form APD Comments

Permit 324473

<u>District I</u> 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

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** 

#### PERMIT COMMENTS

rator Name and Address: API N	Number:
Tascosa Energy Partners, L.L.C [329748]	30-015-49938
901 W. Missouri Ave	:
Midland, TX 79701	LeMans 19 24 State Com #305H

Created By	Comment	Comment Date
kpickford	Defining well	9/1/2022

Permit 324473

Form APD Conditions

<u>District I</u> 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

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**

#### PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
Tascosa Energy Partners, L.L.C [329748]	30-015-49938
901 W. Missouri Ave	Well:
Midland, TX 79701	LeMans 19 24 State Com #305H

OCD	Condition
Reviewer	
kpickford	Notify OCD 24 hours prior to casing & cement
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
	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
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud,
	drilling fluids and solids must be contained in a steel closed loop system

### LeMans 2419 State Com # 305H "Cement Program"

SL= 1097 FSL & 297 FWL, Section 24, T20S, R26E, Eddy County, New Mexico.

BHL = 1320 FSL & 100 FEL, Sec 19, T20S, R27E, Eddy County, New Mexico

API # 30-015

3rd Bone Springs Horizontal Test\_TVD  $\pm$  7,500-7,730ft .80° F Temp Gradient per 100 ft + 75° F surface

1. Surface hole depth = 500 ft. (79°F) TOC @surface w/ 200% W/O

Surface hole = 17.5 inch

Surface casing = 13.375" 48# H-40 STC

Float Collar "PDC Drillable" 1 jts up.

Hardware needed = 8 spring centralizers-(6) first 6 jts\_(1) every 3rd jt to surface

1 Guide shoe PDC Drillable

1 Float Collar (1 jt Up) PDC Drillable

2 thread lock

(2) collar stops (15' up from shoe) + (15' up from FC)

### Engineering Data <u>"Surface</u>":

500 ft 17.5 inch hole x 13.375" csg = .6946 cuft/ft X 500 X 3.0 excess = 1042 cu ft 44 ft 13.375" 54.5 # casing volume= .8679 X 44 ft = 38 cu ft Total Cement volume required = 1,090 cu ft.

<u>Lead slurry</u> "Scavenger" Anticipated Coverage (250-surf) = 531 cu ft "C" 65:35poz w/ 2% CaCl2, 12.0 ppg yield 2.07 cu ft/sk = (sks)

### Slurry 1 Cement Tested @ 80°F

Thickening Time 4hr 37 min

Compressive Strength = 8:53\_ 500 psi; 24:00\_815 psi
.07% FW in 2 hrs

FL = NC

Gel Strength = 10 sec 10.3; 10 min 26.2

PV = 16.2

YP = 18.3

<u>Tail Slurry Anticipated Coverage (500'-250)</u> = 559 cu ft Class "C" w/ 2% CaCl2 14.8 ppg yield 1.35 cu ft / sk = (sks)

### Slurry 2 Cement Tested @ 79°F

Thickening Time 2hr 08 min

Compressive Strength = 5:53\_ 500 psi; 36:00\_1818 psi
0% FW in 2 hrs

FL = 100 ml/30 min

Gel Strength = 10 sec 15.3; 10 min 19.9

PV = 24

YP = 17.8

Include 350 sks class "C" neat for top out + sack Calcium Chloride for mixing water (3%) if needed.

2. Intermediate hole depth=2,500 ft. (99° F) TOC @ Surface w/ 150% W/O open hole

Intermediate hole = 12.25 inch

Intermediate Casing = 9.625" 36# J-55 LTC

Float Collar 1 its up.

Hardware needed =

12 spring cent space equally to Surface

1 Guide Shoe

1 float collar (1 jt up)

4 thread lock Casing Packer

### **Engineering Data "Intermediate":**

2050 ft 12.25 inch open hole x 9.625 csg = .3132 cuft/ft X 2050 X 2.5 excess = **1,605 cu ft** 

450 ft 9.625 x 13.375'' casing = .3765 cu ft/ft X 450 = 169 cu ft

44 ft 9.625"32 # casing volume= .43 X 44 ft = **22 cu ft** 

Total Cement volume required = 1,796 cu ft.

<u>Lead</u> Slurry Anticipated Coverage (2000-Surface) = 1382 cu ft "C" 65/35 poz w/ 2pps Sodium Metasilicate 12.0 ppg yield 2.03 cu ft/sk = **(681 sks)** 

### Lead Slurry Tested @ 99°F

Thickening Time 5hr 59 min

Compressive Strength = 24:00 hrs \_ 349 psi
.2% in 2 hrs (2.5 ml/250 ml)

Gel Strength = 10 Sec 17.6; 10 min 25.1

PV = 13.3

YP = 16.1

<u>Tail Slurry Anticipated Coverage (2500-2000)</u> = 414 cu ft Class "C" w/ 2% CaCl2 14.8 ppg yield 1.35 cu ft / sk = (307 sks)

### Slurry 2 Cement Tested @ 100°F

Thickening Time 1hr 56 min

Compressive Strength = 3:31\_ 500 psi; 36:0\_ 2229 psi
.8% FW in 2 hrs

FL = 100 ml/30 min

Gel Strength = 10 sec 16.6; 10 min 16.7

PV = .7

YP = 17.5

Include 350 sks class "C" neat for top out + sack Calcium Chloride for mixing water (3%) if needed.

3. Production Hole Depth = ± 17,681 ft. "± 7,730' TVD Max. (Temp 137.7° F)\_TOC @ surface w/ 50% (W/O) OPEN HOLE (1 stage cmt job). NEED 18 HR SERVICE TIME TO PUMP JOB!

Prod Hole Part 1 = 8.5 inch = 7,930-17,681 ft (9,751') x .2290 x 1.5 = (3,341 CuFt) Prod Hole Part 2 = 8.75 inch = 2,500-7,930 ft (5,430') x .2526 x 1.5 = (2,058 Cuft) Prod Hole Part 3 = 9.625 36# Csg x 5.5'' Csg (2500') (673 Cu ft) Shoe Joint = NA Wet Shoe

### Total Cmt needed = 6,078 cuft 3299 sacks

KOP ± 6,942' MD. EOC ± 7,830' (88.659°)

**5.5" seat = 17,681 MD. TOC calculated to Surface** w/ 50% Washout open hole.

Production Casing = 5.5 inch 20 # RY 110 w/ GBDC or Equivalent Connections Hardware Needed = 60 spring Centralizers every 3<sup>rd</sup> jt. 7500 to surface

43 Rigid standoff Centralizers (1 every 3rd jt in lateral &

Curve.

Wet Float Shoe 8 thread lock

**Engineering Data "Production Casing Cement":** 

Spacer 40 Bbls LCM

### Slurry 1 Coverage = (5,000-Surface)

8.75" OH x 5.5" Csg = 2,500' x .2526 cu ft / ft x 1.5 = **947 cu ft.** 5.5" Csg x 9-5/8 36# csg = 2,500' x .2691 cu ft / ft = **673 cu ft.** Slurry 1 Total = 1,620 cu ft.

**Total Slurry 1 Recipe = (1,620 cu ft) (365 sacks)** class "C" 50/50 poz 10.5 ppg yield 4.44 cu ft/sk w/ 10% bentonite + 10% Silica Fume + 1.5% Sodium Metasilicate + 5 pps LCM, .4% Anti Foam, .55% Iron Seq, 5% BWOW Salt.

### Slurry 1 Cement Tested @ 141°F

Thickening Time 6hr 02 min

Compressive Strength = 10:41\_ 50 psi; 15:29\_ 100 psi; 72 hr\_346 psi
1% in 2 hrs (2.5 ml/250 ml)

Gel Strength = 10 Sec 22; 10 min 32

PV = 5.8

YP = 19

### Slurry 2 Coverage = (17,681 - 5,000 ft)

17,681 -7,930 (9,751 ft) 8.5" OH x 5.5" Csg .2290 cu ft / ft x 1.5 = **3,349** cu ft 7,930— 5,000 (2,930 ft) 8.75" OH x 5.5" Csg .2526 cu ft/ft x 1.5 = **1,110** cu ft Shoe jt = **6** Cu Ft Slurry **2** Total = **4,458** cu ft

**Total Slurry 2 Recipe = (4,459 cu ft) (2,934 sacks)** class **"H"** 50/50 poz 13.2 ppg yield 1.52 cu ft/sk w/ 5% bentonite + .2% Sodium Metasilicate + 3 BWOW NaCl + .4% Fluid Loss Gas Migration Additive, .35% Retarder, .2% Anti Foam. 7.27 GPS H2O.

### Slurry 2 Cement Tested @ 140°F

Thickening Time 5hr 37 min

Compressive Strength = 9:34\_ 50 psi; 20:08\_ 500 psi; 72 hr\_1,622 psi
0% FW in 2 hrs

FL = 100 ml/30 min

Gel Strength = 10 sec 4; 10 min 8

PV = 120.9

YP = 13.2

Intent		As Dril	led											
API#														
Ope	Operator Name:						Property Name:							
Kick C	off Point	(KOP)												
UL	Section	Township	Range	Lot	Feet	F	From N	N/S	Feet		Fron	From E/W County		
Latitu	de				Longitu	ıde							NAD	
First T	ake Poin	nt (FTP)												
UL	Section	Township	Range	Lot	Feet	i	From N	N/S	Feet		Fron	n E/W	County	
Latitu	de				Longitu	ıde			<u> </u>				NAD	
Last T	ake Poin	t (LTP)												
UL	Section	Township	Range	Lot	Feet	From	N/S	Feet		From	E/W	Count	У	
Latitu	de				Longitu	Longitude NAD								
Is this If infil	well an i	defining vinfill well?						_	vell n	] umber	for I	Definir	ng well fo	r Horizontal
Ope	rator Nar	me:				Property Name:						Well Number		
Estim	ated Fori	mation Top	os											
Form	ation:				Тор:		For	matio	n:					Тор:

LeMans 24-19 State Com wells and their anticipated facility are <u>not</u> expected to have Hydrogen Sulfide releases. However, there may be Hydrogen Sulfide production in the nearby area. There are no occupied dwellings within a mile of the area but a contingency plan has been orchestrated. Tascosa Energy Partners, LLC will have a Company Representative living on location throughout the drilling and completion of this well. If Hydrogen Sulfide is detected or suspected, monitoring equipment will be available for monitoring and/or testing. An un-manned H2S safety trailer and monitoring equipment will also be station on location during the drilling operation below the Surface Casing depth of ± 500 ft. to total drilling depth of ± 13,000 ft.

### EMERGENCY CALL LIST: (Start and continue until ONE of these people have been contacted)

contacted)	OFFICE	MOBILE	HOME
Tascosa Energy ,LLC.	432 695-6970		
Alyssa McNear		720 244 4417	
Jeff Birkelbach	432 695-6970	432 553 0391	
Brian Kirkland		432 770-2325	
Kevin Herrmann	432 695-6970	432 254-9106	
EMERGENCY RESPONSE N	NUMBERS:		
State Police:	Eddy County		575 748 9718
State Police:	Lea County		575 392 5588
Sheriff Sheriff	Eddy County Lea County		575 746 2701
Emergency Medical Ser	Eddy County		911 or 575 746 2701
(Ambulance)	Lea County	Eunice	911 or 575 394 3258
Emergency Response	Eddy County SERC		575 476 9620
Artesia Police Dept			575 746 5001
Artesia Fire Dept			575 746 5001
On John J. D. Park David			F7F 00F 0444
Carlsbad Police Dept Carlsbad Fire Dept			575 885 2111 575 885 3125
odriobad i no bopt			070 000 0120
Loco Hills Police Dept			575 677 2349
Jal Police Dept			575 395 2501
Jal Fire Dept			575 395 2221
Jal ambulance			575 395 2221
Eunice Police Dept			575 394 0112
Eunice Fire Dept			575 394 3258

Eunice Ambulance		575 394 3258
<b>Hobbs Police Dept</b>		
NMOCD	District 1 (Lea, Roosevelt, Curry) District 2 ( Eddy Chavez)	575 393 6161 575 748 1283
BLM Carlsbad BLM Hobbs		575 234 5972 575 393 3612
Lea County Information		575 393 8203
Midland Safety	Lea/Eddy County	432 520 3838 888 262 4964
American Safety	Lea/Eddy County	575 746 1096 575 393 3093
Halliburton	Artesia Hobbs Midland	800 844 8451 800 844 8451 800 844 8451
Wild Well Control	Midland	281 784 4700 281 443 4873

### **TABLE OF CONTENTS**

HYDROGEN SULFIDE TRAINING	
H2S SAFETY EQUIPMENT AND SYSTEMS	
GENERAL EMERGENCY PLAN	page 7
EMERGENCY PROCEDURE FOR UNCONTROLLED RELEASES OF H2S	page 7
CALCULATIONS OF THE GENERAL RADIUS OF EXPOSURE (ROE)	page 8
PUBLIC EVACUATION PLAN	page 8
PROCEDURE FOR IGNITING AN UNCONTROLLABLE CONDITION:	
PROCEDURE FOR IGNITION	page 9
REQUIRED EMERGENCY EQUIPMENT	page 8
USING SELF CONTAINED BREATHING AIR EQUIPMENT ( SCBA)	page 9
RESCUE & FIRST AID FOR VICTIMS OF HYDROGEN SULFIDE (H2S) POISONING	page 10
H2S TOXIC EFFECTS	page 11
H2S PHYSICAL EFFECTS	page 11
LOCATION MAP	page 12-13

SEC 24 & 19, T20S, R27/26E, Eddy County, New Mexico

### 1. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well

- 1. The hazards and characteristics of hydrogen sulfide (H2S)
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures and prevailing winds.
- 4. The proper techniques for first aid and rescue procedures

In addition, supervisory personnel will be trained in the following areas:

- 1. The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in the special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of H2S Drilling Operations Plan and the Public Protection plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

### 2. <u>H2S Safety Equipment and Systems</u>

Note: All H2S safety equipment and systems will be installed, tested and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S. If H2S greater than 100 ppm is encountered in the gas stream we will shut-in and install H2S equipment.

- 1. Well Control Equipment:
  - a. Flare Line
  - b. Choke manifold with remotely operated choke
  - c. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

SEC 24 & 19, T20S, R27/26E, Eddy County, New Mexico

- d. Auxiliary equipment to include; annular preventer, mud gas separator, rotating head.
- 2. Protective equipment for essential personnel:
  - a. Mark II Survive air 30 minute units located in the dog house and at the briefing areas.
- 3. H2S detection and monitoring equipment:
  - a. 2-portable H2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.
- 4. Visual warning systems:
  - a. Caution/Danger signs shall be posted on roads providing direct access to the location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate.
- 5. Mud Program:
  - a. The mud program has been designed to minimize the volume of H2S circulated to the surface.
- 6. Metallurgy:
  - a. All drill strings, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
- 7. Communications:
  - a. Company vehicles equipped with cellular telephone.

Tascosa Energy Partners, LLC has conducted a review to determine if an H2S contingency plan is required for the subject well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore, we do not believe that an H2S contingency plan is necessary

### **General H2S Emergency Actions:**

- 1. All personnel will immediately evacuate to an up-wind and if possible up-hill "safe area"
- 2. If for any reason a person must enter the hazardous area, they must wear a SCBA (Self Contained Breathing Apparatus)
- 3. Always use the "buddy system"
- 4. Isolate the well/problem if possible
- 5. Account for all personnel
- 6. Display the proper colors warning all unsuspecting personnel of the danger at hand.
- 7. Contact the Company personnel as soon as possible if not at the location. ( use the enclosed call list as instructed

SEC 24 & 19, T20S, R27/26E, Eddy County, New Mexico

At this point the company representative will evaluate the situation and coordinate the necessary duties to bring the situation under control, and if necessary, the notification of the emergency response agencies and nearby residents.

### EMERGENCY PROCEDURES FOR AN UNCONTROLLABLE RELEASE OF H2S

- 1. All personnel will wear the self-contained breathing apparatus.
- 2. Remove all personnel to the "safe area". (always use the buddy system).
- 3. Contact company personnel if not on location.
- 4. Set in motion the steps to protect and or remove the general public to an upwind "safe area". Maintain strict security & safety procedures while dealing with the source.
- 5. No entry to any unauthorized personnel.
- 6. Notify the appropriate agencies: City Police-City Street (s)
  State Police- State Rd
  County Sheriff County Rd.
- 7. Call the BLM &/or NMOCD

### PROTECTION OF THE GENERAL PUBLIC (Radius of Exposure):

- 100 ppm at any public area (any place not associated with this site)
- 500 ppm at any public road (any road which the general public may travel)
- 100 ppm radius of ¼ mile in New Mexico will be assumed if there is insufficient data to
  do the calculations, and there is a reasonable expectation that H2S could be present in
  concentrations greater than 100 ppm in the gas mixture

### CALCULATIONS FOR THE 100 PPM (ROE) "Pasquill-Gifford equation"

X = [(1.589) (mole fraction) (Q- volume in std cu ft)] to the power of (0.6258)

### **CALCULATION FOR THE 500 PPM ROE:**

X = [(.4546) (mole fraction) ( Q - volume in std cu ft)] to the power of (0.6258)

### **Example:**

If a well/facility has been determined to have 150 / 500 ppm H2S in the gas mixture and the well/facility is producing at a gas rate of 100 MCFPD then:

150 ppm X= 
$$[(1.589) (.00015) (100,000 \text{ cfd})]$$
 to the power of  $(.6258)$  X= 7 ft

500 ppm 
$$X=[(.4546) (.0005) (100,000 cfd)]$$
 to the power of (.6258)  $X=3.3 ft$ .

(These calculations will be forwarded to the appropriate District NMOCD office when Applicable)

### **PUBLIC EVACUATION PLAN:**

- 1. Notification of the emergency response agencies of the hazardous condition and implement evacuation procedures.
- A trained person in H2S safety, shall monitor with detection equipment the H2S concentration, wind and area exposure (ROE). This person will determine the outer perimeter of the hazardous area. The extent of the evacuation area will be determined from the data being collected. Monitoring shall continue until the situation has been resolved. (All monitoring equipment shall be UL approved, for use in class 1 groups A,B,C & D, Division 1, hazardous locations. All monitor will have a minimum capability of measuring H2S, oxygen, and flammable values).
- Law enforcement shall be notified to set up necessary barriers and maintain such for the duration of the situation as well as aid in the evacuation procedure.
- The company supervising personnel shall stay in communication with all agencies throughout the duration of the situation and inform such agencies when the situation has been contained and the affected area(s) is safe to enter.

### PROCEDURE FOR IGNITING AN UNCONTROLABLE CONDITION:

- 1. Human life and/or property are in danger
- 2. There is no hope of bringing the situation under control with the prevailing conditions at the site.

### **INSTRUCTION FOR IGNITION:**

• 1. Two people are required. They must be equipped with positive pressure, "self - contained breathing apparatus" and a "D" ring style full body, OSHA approved safety harness. Nonflammable rope will be attached.

SEC 24 & 19, T20S, R27/26E, Eddy County, New Mexico

- 2. One of the people will be qualified safety person who will test the atmosphere for H2S, Oxygen & LFL. The other person will be the company supervisor; he is responsible for igniting the well.
- 3. Ignite up wind from a distance no closer than necessary. Make sure that where you ignite from has the maximum escape avenue available. A 25 mm flare gun shall be used, with a ± 500 ft. range to ignite the gas.
- 4. Prior to ignition, make a final check for combustible gases.
- 5. Following ignition, continue with the emergency actions & procedures as before.

### A. All personnel shall receive proper H2S training in accordance with Onshore Order III.C.3.a.

- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment:
  - Well control equipment
    - a. Flare line 100' from wellhead to be ignited by flare gun or automatic striker.
    - b. Choke manifold with a remotely operated choke.
    - c. Mud/gas separator
  - Protective equipment for essential personnel.

#### Breathing apparatus:

- a. Rescue Packs (SCBA) 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- b. Work/Escape packs —4 packs shall be stored on the rig floor th sufficient air hose not to restrict work activity.
- c. Emergency Escape Packs —4 packs shall be stored in the doghouse for emergency evacuation.

### Auxiliary Rescue Equipment:

- a. Stretcher
- b. Two OSHA full body harness
- c. 100 ft 5/8inch OSHA approved rope
- d. 1-20# class ABC fire extinguisher
- H2S detection and monitoring equipment:

SEC 24 & 19, T20S, R27/26E, Eddy County, New Mexico

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged. (Gas sample tubes will be stored in the safety trailer)

### ■ Visual warning systems.

- a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
- b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
- c. Two wind socks will be placed in strategic locations, visible from all angles.

### ■ Mud program: Only utilized if H2S has been detected

The mud program has been designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.

### ■ Metallurgy: Only utilized if H2S has been detected

- a. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
- b. All elastomers used for packing and seals shall be H2S trim.

### ■ Communication: Only utilized if H2S has been detected

Communication will be via two way radio in emergency and company vehicles. Cell phones and land lines where available.

### **USING SELF CONTAINED BREATHING AIR EQUIPMENT (SCBA):**

- (SCBA) SHOULD BE WORN WHEN ANY OF THE FOLLOWING ARE PERFORMED: Only utilized if H2S has been detected
  - Working near the top or on top of a tank
  - > Disconnecting any line where H2S can reasonably be expected
  - > Sampling air in the area to determine if toxic concentrations of H2S exist.
  - Working in areas where over 10 ppm on H2S has been detected.
  - At any time there is a doubt as the level of H2S in the area.
- All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous location.
- Facial hair and standard eyeglasses are not allowed with SCBA.
- Contact lenses are never allowed with SCBA.

SEC 24 & 19, T20S, R27/26E, Eddy County, New Mexico

- Air quality shall be continuously be checked during the entire operation.
- After each use, the SCBA unit shall be cleaned, disinfected, serviced and inspected
- All SCBA shall be inspected monthly.

### RESCUE AND FIRST AID FOR VICTIMS OF HYDROGEN SULFIDE (H2S) POISONING:

- Do not panic
- Remain Calm & think
- Get on the breathing apparatus
- Remove the victim to the safe breathing area as quickly as possible. Up wind an uphill from source or cross wind to achieve upwind.
- Notify emergency response personnel.
- Provide artificial respiration and or CPR, as necessary
- Remove all contaminated clothing to avoid further exposure.
- A minimum of two personnel on location shall be trained in CPR and First Aid.

SEC 24 & 19, T20S, R27/26E, Eddy County, New Mexico

### **Hydrogen Sulfide (H2S) Toxic Effects**

H2S is extremely toxic. The acceptable ceiling for eight hours of exposure is 10 ppm, which is .001% by volume. H2S is approximately 20% heavier than air (Sp. Gr= 1.19)(Air = 1) and H2S is colorless. It forms an explosive mixture with air between 4.3% and 46%. By volume hydrogen sulfide is almost as toxic as hydrogen cyanide and 5-6 times more toxic than carbon monoxide.

٧	ari	ous	Gas	es

COMMON NAME	CHEMICAL ABBREV.	SPECIFIC GRVTY.	THRESHOLD LIMITS	HAZARDOUS LIMITS	LETHAL CONCENTRATIONS
Hydrogen Sulfide	H2S	1.19	10ppm 15 ppm	100 ppm/hr	600 ppm
Hydrogen Cyanide Sulfur Dioxide	HCN SO2	0.94 2.21	10 ppm	150 ppm/hr N/A	300 ppm
Chlorine	CL2	2.45	2 ppm 1 ppm	4 ppm/hr	1000 ppm 1000 ppm
Carbon Monoxide	СО	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	CO2	1.52	5000 ppm	5%	10%
Methane	CH4	0.55	90,000	Combustible@ 5%	N/A

**Threshold Limit:** Concentrations at which it is believed that all workers may be repeatedly exposed, day

after day without adverse effects.

**Hazardous Limit:** Concentrations that may cause death.

**Lethal Concentrations:** Concentrations that will cause death with short term exposure.

Threshold Limit- 10 ppm: NIOSH guide to chemical hazards.

### PHYSICAL EFFECTS OF HYDROGEN SULFIDE:

CONCENTRATION		PHYSICAL EFFECTS
.001%	10 PPM	Obvious and unpleasant odor. Safe for 8 hour exposure
.005%	50 ppm	Can cause some flu like symptoms and can cause pneumonia
.01%	100 ppm	Kills the sense of smell in 3-15 minutes. May irritate the eyes
		and throat.
		1
.02%	200 ppm	Kills the sense of smell rapidly. Severly irritates the eyes and
		throat. Severe flu like symptoms after 4 or more hours. May
		cause lung damage and or death.
.06%	600 ppm	Loss of consciousness quickly, death will result if not rescued
		promptly.

### LONG'S METHOD OF SURVEY COMPUTATION

#### **OBLIQUE CIRCULAR ARC INTERPOLATION**

### DISTANCE TABLE

	MD OF INTERPOLATION DEPTH,(feet)
#N/A	TVD COORDINATE OF THE DEPTH (feet)
#N/A	N/S COORDINATE OF DEPTH (feet)
#N/A	E/W COORDINATE OF DEPTH (feet)

STATION A	STATION B

#### 3 D DISTANCE BETWEEN STATION A AND STATION B 0.00 ft **TABLE OF SURVEY STATIONS** Calculator = ΔMD INCL MD TVD N+/S-E+/W-DLS deg deg deg/100FT 1 TIE POINT => 0 0 1850.00 1850.00 0.00 0.00 2 100 2 312.07 1950.00 1949.98 1.17 -1.30 2.00 3 100 4.92 312.07 2050.00 2049.79 5.21 -5.78 2.92 4 100 4.92 2150.00 2149.42 10.96 -12.14 0.00 312.07 5 100 4.92 312.07 2250.00 2249.05 16.71 -18.51 0.00 6 4.92 100 312.07 2350.00 2348.68 22.45 -24.87 0.00 7 4.92 2450.00 2448.31 0.00 100 312.07 28.20 -31.24 8 3000 4.92 5450.00 5437.26 200.60 -222.24 0.00 312.07 9 100 4.92 312.07 5550.00 5536.89 206.34 -228.60 0.00 10 100 4.92 312.07 5650.00 5636.52 212.09 -234.97 0.00 100 4.92 5750.00 -241.34 0.00 11 312.07 5736.15 217.84 12 100 2 312.07 5850.00 5835.96 221.88 -245.82 2.92 13 100 0 312.07 5950.00 5935.94 223.05 -247.11 2.00 14 100 0 6050.00 6035.94 223.05 -247.11 0.00 0 15 100 0 0 6150.00 6135.94 223.05 -247.11 0.00 16 592 0 0 6742.00 6727.94 223.05 -247.11 0.00 17 6842.00 6827.94 223.05 -247.11 0.00 100 0 0 18 100 0 0 6942.00 6927.94 223.05 -247.11 0.00 19 100 10 90 7042.00 7027.43 223.05 10.00 -238.41 20 20 90 7123.90 100 7142.00 223.05 -212.56 10.00 21 100 30 90 7242.00 7214.42 223.05 -170.35 10.00 22 100 40 90 7342.00 7296.23 223.05 -113.07 10.00 23 100 50 90 7442.00 7366.85 223.05 -42.44 10.00 24 100 60 90 7542.00 7424.14 223.05 39.37 10.00 100 7466.34 25 70 90 7642.00 10.00 223.05 129.88 26 100 80 90 7742.00 7492.19 10.00 223.05 226.35 27 88 88.67 90 7830.00 7500.87 9.85 223.05 313.84 28 100 90 7930.00 0.00 88.67 7503.19 223.05 413.81 29 9700 88.67 90 17630.00 7728.34 10111.20 0.00 223.05 30 90 51 88.67 17681.00 7729.52 223.05 10162.19 0.00



### **LeMans 24-19 State DSU – Natural Gas Management Plan**

### VI. Separation Equipment:

Tascosa has sized a FWKO and a high pressure, 3-phase separator to allow for complete separation at our anticipated rates, with adequate retention times. Tank vapors will also be captured through a vapor recovery unit and sent to the Enterprise sales line through a compressor at the gathering station.

### **VII. Operational Practices:**

- a. Drilling Operations Tascosa will ensure that a flare stack is set at least 100' from the wellbore during drilling operations. This flare stack will be properly sized to handle the maximum expected release, ensuring that all natural gas produced during drilling operations can be flared (unless there is an equipment malfunction or if venting is necessary for safety reasons).
- b. Completion Operations Prior to flowback, Tascosa will ensure that the well is connected to a gathering system that can handle the expected gas volumes. During flowback, natural gas will be separated and flared until it is within the specs of the contracted gathering system (Enterprise).
- c. Production Operations Tascosa will conduct weekly AVO inspections and tackle equipment failures with haste. The emergency flare on location will be equipped with an auto-ignition, capable of handling the maximum expected release. Sight glasses will be installed on all tanks to eliminate gas releases due to gauging through thief hatches. A VRU will also be installed to capture tank vapors and reduce waste. In preparation of a VRU failure or planned maintenance, a backup combustor will be placed at the facility.
- d. Performance Standards
  - a. Tascosa will design completion and production equipment for maximum expected output and pressure to eliminate venting.
  - b. A properly sized flare stack will be placed at the facility with an automatic ignitor.
  - c. AVO inspections will be conducted at least once a week to prevent releases due to equipment failure. These inspections will be recorded for future review.
  - d. Tascosa is obligated to eliminate waste and will repair equipment failures as soon as possible.
- e. Measurement and Estimation A meter will be placed on the combustor and the flare stack to ensure combusted gas readings are accurate during a release event. If for any reason a meter reading is unavailable, released volumes will be estimated and reported.



### **VIII. Best Management Practices:**

Tascosa will aim to conduct surface maintenance without venting or flaring as much as possible. If planned maintenance is prolonged due to wait times for labor and equipment, Tascosa will shut in the producing well to prevent excess emissions. Tascosa will also minimized venting during downhole operations.

### State of New Mexico Energy, Minerals and Natural Resources Department

Submit Electronically Via E-permitting

Date: 08/231 /2022

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

### NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### Section 1 – Plan Description Effective May 25, 2021

Tascosa Energy Partners, LLC. OGRID: 329748

Amendment	due to □ 19.15.27.	9.D(6)(a) NMAC	C □ 19.15.27.9.D(	(6)(b) NMAC □	Other.			
						_		
				wells proposed to	o be drilled or proposed	d to		
API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D			
	M-24-20S-26E	1097 FSL,297 FWL	1200	4800	1650			
IV. Central Delivery Point Name:Catalina 30 [See 19.15.27.9(D)(1) NMAC]  V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.								
API	Spud Date	TD Reached Date				on		
	10/03/2022	11/19/22	03/01/2023	04/01/2	2023 04/05/2023	3		
VI. Separation Equipment:  ☐ Attach a complete description of how Operator will size separation equipment to optimize gas capture.  VII. Operational Practices: ☐ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.  VIII. Best Management Practices: ☐ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.								
	following infingle well pad  API  Sint Name:  Le: Provide the bleted from a series:  API  ent:  Attached Attached 19.15.27.8 in the provide series:  Attached 19.15.27.8 in the provide series:  Attached 19.15.27.8 in the provide series and the provide series are series as a series are series are series as a series are series are series as a series are series are series as a series are series are series as a series are series a	following information for each angle well pad or connected to a connected for a connected to a connected for a connect	following information for each new or recomplering might well pad or connected to a central delivery particle.  API ULSTR Footages  M-24-20S-26E 1097 FSL,297 FWL  Sint Name:Catalina 30	following information for each new or recompleted well or set of vingle well pad or connected to a central delivery point.  API ULSTR Footages Anticipated Oil BBL/D  M-24-20S-26E 1097 FSL,297 FWL 1200  int Name: Catalina 30 [S]  le: Provide the following information for each new or recompleted oleted from a single well pad or connected to a central delivery point API Spud Date TD Reached Completion Commencement 10/03/2022 11/19/22 03/01/2023  ent: Attach a complete description of how Operator will size sep ices: Attach a complete description of the actions Operator will of 19.15.27.8 NMAC.  t Practices: Attach a complete description of Operator's best in	following information for each new or recompleted well or set of wells proposed to a central delivery point.  API ULSTR Footages Anticipated Oil BBL/D Gas MCF/D  M-24-20S-26E 1097 FSL.297 FWL 1200 4800  Sint Name: Catalina 30 [See 19.15.27.9(Inc.)]  Catalina 30 [See 19.15.27.9(Inc.)]  API Spud Date TD Reached Completion Commencement Date Back 10/03/2022 11/19/22 03/01/2023 04/01/2024 04/01/2025 04/01/202	following information for each new or recompleted well or set of wells proposed to be drilled or proposed ngle well pad or connected to a central delivery point.  API ULSTR Footages Anticipated Oil BBL/D Gas MCF/D Produced Water BBL/D  M-24-20S-26E 1097 FSL,297 FWL 1200 4800 1650  Sint Name: Catalina 30 [See 19.15.27.9(D)(1) NMAC]  The Provide the following information for each new or recompleted well or set of wells proposed to be drilled beleted from a single well pad or connected to a central delivery point.  API Spud Date TD Reached Completion Initial Flow Back Date Date 10/03/2022 11/19/22 03/01/2023 04/01/2023 04/01/2023 04/05/2023  The Provide the following information for each new or recompleted well or set of wells proposed to be drilled beleted from a single well pad or connected to a central delivery point.  API Spud Date TD Reached Completion Initial Flow Back Date Date 10/03/2022 11/19/22 03/01/2023 04/01/2023 04/05/202		

### Section 2 – Enhanced Plan <u>EFFECTIVE APRIL 1, 2022</u>

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

🗵 Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

### IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

### X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map.   Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the
production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of
the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural	gas gathering system $\square$ wi	ll □ will not have o	capacity to gather	100% of the anticipated	natural gas
production volume from the well	prior to the date of first prod	duction.			

XIII. Line Pressure. Operator $\square$ does $\square$ does not anticipate that its existing well(s) connected to the same segment, or portion, or	f the
natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well	l(s).

$\neg$	A 441- (	O + ,	1	4	14:	:	4-41:	sed line pressi	
- 1	Attach (	Unerator'	s man	to manage	production	in response	to the increa	sea iine pressi	ıre

XIV. Confidentiality:   Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided	in
Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific informati	on
for which confidentiality is asserted and the basis for such assertion.	

(h)

(i)

### Section 3 - Certifications <u>Effective May 25, 2021</u>

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal: \( \times \) Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system: or ☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. If Operator checks this box, Operator will select one of the following: Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or Venting and Flaring Plan. 

Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including: power generation on lease; (a) **(b)** power generation for grid; compression on lease; (c) (d) liquids removal on lease; reinjection for underground storage; (e) **(f)** reinjection for temporary storage; **(g)** reinjection for enhanced oil recovery;

### **Section 4 - Notices**

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

other alternative beneficial uses approved by the division.

fuel cell production; and

- (a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or
- (b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.
- 2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: Alyssa McNear  Printed Name: Alyssa McNear
Printed Name: Alyssa McNear
Title: Engineering Manger
E-mail Address: adavanzo@tascosaep.com
Date: 08/31/2022
Phone: 720-244-4417
OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval: