Form C-101 August 1, 2011

Permit 322791

<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 **District IV**

8/8/2022

Date:

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

	ncis Dr., Santa Fe, N 76-3470 Fax:(505) 47				Ouri	ita i	C, 14111 07 C						
		APPLICATION	I FOR	PERMIT T	O DRILL,	, RE-E	NTER, DEEPEN	I, PLUGBAC	K, OR ADD	_			
	me and Address									2. OGI	RID Number 329748		
	scosa Energy Part W. Missouri Ave	ners, L.L.C								3 API	Number		
	lland, TX 79701						30-015-49817						
4. Property Cod	de	5. Pro	perty Nar	ne						6. Wel	l No.		
333	3128		BON	NEVILLE 16	STATE		201H						
					7.	. Surfac	e Location						
UL - Lot	Section 16	Township 20S	Range	e 27E	Lot Idn	F	eet From 1290	N/S Line	Feet From	250	E/W Line W	County	Eddy
					8. Propos	sed Bot	tom Hole Location	1					
UL - Lot	Section	Township	Range		Lot Idn		Feet From	N/S Line	Feet From		E/W Line	County	
A	16	20S		27E		Α	660	N		100	E		Eddy
					9	. Pool I	nformation						
AVALON;BOI	NE SPRING, NOR	TH									3712		
					Addit	tional W	/ell Information						
11. Work Type		12. Well Type		13. Cable/Ro	otary			14. Lease		15. Gro	ound Level Elevation	ı	
	w Well	OIL							State		3293		
16. Multiple N		17. Proposed Depth 11509		18. Formatio	on nd Bone Sp	orina Sa	nd	19. Contrac	ctor	20. Spt	ud Date 9/15/2022		
Depth to Groun	nd water	11000			n nearest fres					Distanc	e to nearest surface	water	
We will be	using a closed-lo	op system in lieu of li	ned pits	5									
						Casin	g and Cement Pro						
Туре	Hole Size	Casing Size		Casir	ng Weight/ft			Setting Depth Sacks of					
Surf Int1	17.5 12.25	13.375 9.625			48 36		500 2500		73			0	
Prod	8.5	5.5			20		11509		187	53 0			
1100	0.0	0.0				_			10.				
				Casi	ng/Cement	Progra	m: Additional Cor	nments					
				22	2. Proposed	Blowo	ut Prevention Pro	gram					
	Туре		Worki	ng Pressure				Test Pressure			Manufa	cturer	
,	Annular			5000				5000			CT	П	
	Pipe			5000				5000			СТ	П	
	Blind		;	5000				5000			СТ	П	
									OII OONO==:	/A TIO: :	DII (10101)		
23. I hereby of knowledge a		rmation given above is	s true ar	na complete	to the best	of my			OIL CONSER\	AHON	DIVISION		
	ify I have complie	ed with 19.15.14.9 (A)	NMAC	☐ and/or 19	9.15.14.9 (B) NMAC	3						
Signature:													
Printed Name:	Electronica	ally filed by Kelly M Ha	rdy				Approved By:	Katherine	Pickford				
Title:	Land Mana	ager					Title:	Geoscient	ist				
Email Address:	: khardy@ta	ascosaep.com					Approved Date: 8/15/2022 Expiration Date: 8/15/2024						

Conditions of Approval Attached

Phone: 432-695-6970

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
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811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410

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

Santa Fe, NM 87505

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

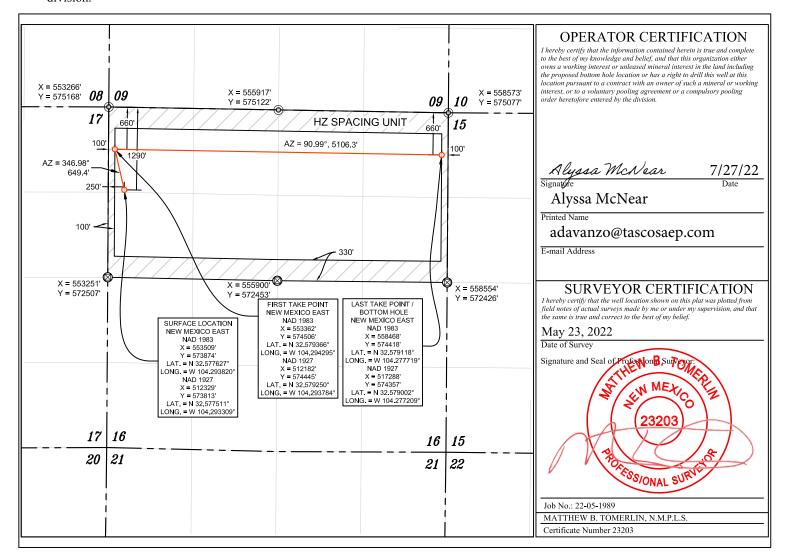
☐ AMENDED REPORT

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

30-015-	Number 49817		_	Pool Code 96381 3	712	Pool Name AVALON;BONE SPRING North					
Property C	ode			BON	Property Name	TATE			Well Number #201H		
333128				ВОГ	NINE VILLE TO S	TAIL		#20	<u>'''</u>		
OGRID N	0.				Operator Name			Eleva	ıtion		
329748 TASCOSA ENERGY PARTNERS, LLC							329	93'			
Surface Location											
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County		
D	16	20 S	27 E		1290	NORTH	250	WEST	EDDY		
			Bot	tom Hole	Location If D	ifferent From Surfa	nce	-			
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County		
A	16	20 S	27 E	660 NORTH 100 EAST ED							
Dedicated Acres 320.00	Joint or	Infill	Consolidation Co	de Or		•	•				

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



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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**

Form APD Comments

Permit 322791

PERMIT COMMENTS

Operator Name and Address:	API Number:			
Tascosa Energy Partners, L.L.C [329748]	30-015-49817			
901 W. Missouri Ave	Well:			
Midland, TX 79701	BONNEVILLE 16 STATE #201H			

(Created By	Comment	Comment Date
	kpickford	Defining well 30-015-49806 BONNEVILLE 16 STATE #302H	8/15/2022

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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**

Form APD Conditions

Permit 322791

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:		
Tascosa Energy Partners, L.L.C [329748]	30-015-49817		
901 W. Missouri Ave	Well:		
Midland, TX 79701	BONNEVILLE 16 STATE #201H		

OCD Reviewer	Condition
kpickford	The pool assignment for this well has been corrected on the C-102. Subsequent sundries must reflect the correct pool.

Bonneville 16 State # 2 Directional

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LONG'S METHOD OF SURVEY COMPUTATION

OBLI	OBLIQUE CIRCULAR ARC INTERPOLATION DISTANCE TABLE											
		MD OF	INTERPOL	ATION DEPTH,	(feet)		STATION A	STATION B				
	#N/A	TVD CO	ORDINATE	OF THE DEPT	H (feet)							
	#N/A			OF DEPTH (fee	, ,							
	#N/A			OF DEPTH (fee	,							
	IIII/A	L/W 00	51101147 (1 L	•	*	I A AND STATION B	0.00	ft				
TADI	E OF CURV		it.									
	LE OF SURVI			· ·		1	Calculator =					
STA #	ΔMD ft	INCL	AZIM	MD ft	TVD ft	N+/S-	E+/W- ft	DLS				
1	TIE POINT =>	deg 0	deg O	1500.00	1500.00	0.00	0.00	deg/100FT				
2	100	3	326.31	1600.00	1599.95	2.18	-1.45	3.00				
3	100	6	326.31	1700.00	1699.63	8.71	-5.80	3.00				
4	100	9	326.31	1800.00	1798.77	19.56	-13.04	3.00				
5	100	10	326.31	1900.00	1897.40	33.30	-22.20	1.00				
6	100	10	326.31	2000.00	1995.88	47.75	-31.83	0.00				
7	1420	10	326.31	3420.00	3394.30	252.91	-168.61	0.00				
8	100	10	326.31	3520.00	3492.78	267.36	-178.24	0.00				
9	100	9	326.31	3620.00	3591.41	281.09	-187.40	1.00				
10	100	6	326.31	3720.00	3690.54	291.95	-194.63	3.00				
11	100 100	3 0	326.31 326.31	3820.00 3920.00	3790.22 3890.18	298.48 300.66	-198.99 -200.44	3.00 3.00				
13	2018	0	0	5938.00	5908.18	300.66	-200.44	0.00				
14	100	0	86.32	6038.00	6008.18	300.66	-200.44	0.00				
15	100	10	86.32	6138.00	6107.67	301.22	-191.75	10.00				
16	100	20	86.32	6238.00	6204.14	302.88	-165.96	10.00				
17	100	30	86.32	6338.00	6294.66	305.59	-123.83	10.00				
18	100	40	86.32	6438.00	6376.47	309.26	-66.67	10.00				
19	100	50	86.32	6538.00	6447.09	313.79	3.81	10.00				
20	100	60	86.32	6638.00	6504.37	319.05	85.45	10.00				
21	100	70	86.32	6738.00	6546.58	324.86	175.78	10.00				
22	100 78	80 87.76	86.32 86.32	6838.00 6916.00	6572.43 6580.74	331.05 336.02	272.05 349.39	10.00 9.95				
24	100	87.76	86.32	7016.00	6584.65	342.43	449.10	0.00				
25	100	87.76	86.32	7116.00	6588.56	348.85	548.82	0.00				
26	4200	87.76	86.32	11316.00	6752.72	618.21	4736.96	0.00				
27	100	87.76	86.32	11416.00	6756.63	624.63	4836.68	0.00				
28	93	87.76	86.32	11509.00	6760.26	630.59	4929.41	0.00				
29												
30								<u> </u>				
31 32												
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45												
46								 				
47								<u> </u>				

Bonneville 16 State # 2 Directional

STA #	∆MD ft	INCL deg	AZIM deg	MD ft	TVD ft	N+/S- ft	E+/W- ft	DLS deg/100FT
48	IL.	ueg	ueg	IL.	ı	IL.	TÇ.	ueg/1001 1
49								
50								
51 52								
53								
54								
55								
56								
57								
58 59								
60								
61								
62								
63								
64 65								
65 66								
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85 86								
87								
88						_		
89								
90								
91								
92 93								
94								
94 95								
96 97								
97								
98 99								
99 100								
101								
102								
103								
104								
105								
106								
107								

Bonneville 16 State # 2 Directional

STA	ΔMD	INCL	AZIM	MD	TVD	N+/S-	E+/W-	DLS
#	ft	deg	deg	ft	ft	ft	ft	deg/100FT
108								
109								
110								
111								
112								
113		1						
114								
115		+						
116								
117		+						
117								
118								
119								
120								
121								
122								
123								
124								
125								
126								
127								
128								
129								
130		1						
131		1						
132								
133								
134								
135								
136								
137								
138								
130								
139		1						
140		1						
141		1						
142								
143								
144								
145								
146								
147								
148								
149								
150								
151								
152		1						
153		1						

Well name:

Bonneville 16 State #201H

Operator: Tascosa Energy Partners, LLC

String type: Surface Casing (500)

Eddy County, New Mexico. SHL= 1,290 FNL & 250 FWL, Sec 16, T20S, R27E BHL = 660 FNL & 100 FEL, Sec 16, T20S, R27E,

Design parameters:					rs:	Environment:			
<u>Collapse</u>				Collapse:		H2S considered?	No	No	
Mud weight:		9.00	ppg	DF	1.125	Surface temperature:	75.0	00 °F	
Design is based on evacuated pi	pe.					BHTemp	7	'9 °F	
						Temp gradient:	9.0	30 °F/100ft	
						Minimum sec length:	500 ft		
				Burst:		Minimum Drift:	12.25 in		
				DF	1.10	Cement top:	Surface		
<u>Burst</u>									
Max anticipated surface									
pressure	=	250.00	psi						
Internal gradient:	=	0.12	psi/ft	Tension:		Non-directional string.			
Calculated BHP	=	310.00	psi	8 Rd STC:	1.80	(J)			
				8 Rd LTC:	1.80	(J)			
No backup mud specified.				Buttress:	1.60	(J)			
				Premium:	1.50	(J)			
				Body yield:	1.50	(B) Re subsec	quent strings	:	
						Next setting depth:	3,000.00	ft	
			Tension is	based on buoye	ed wgt.	Next mud weight:	10.00	ppg	
			Neutral pt:	453.00 ft		Next setting BHP:	1,482.00	psi	
Maximum Lift using 14.8 ppg cmt t	o surfa	ace with 8.5	ppg mud fill	ed csg=		Fracture mud wt:	11.00	ppg	
23,014 lbs lift. String wgt = 24,600	lbs. C	hain down	casing prior	to cmt job		Safety Factor Injection	1.00	ppg	
for Safety.						Fracture depth:	500.00	ft	
						Injection pressure	312.00	psi	

Run Seq	Segment Length	Size	Nominal Weight	Grade	End Finish	True Vert Depth	Measured Depth	Drift Diameter	Internal Capacity	Internal Capacity		
	(ft)	(in)	(lbs/ft)			(ft)	(ft)	(in)	(ft³)	(bbls)		
1	45	13.375	48.00	H-40	ST&C	500	500	12.59	440.9	78.54		
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension			
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strength	Design			
	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(Kips)	(Kips)	Factor			
1	234	740	3.16	312	1730	5.54	24	322	13.417			
	Prepared				Phone: (432) 695 6970	Date:	05/02/22				
	by:	Richard Wrig	ght		FAX: (432) 6	895 6973		Midland, Texas				

Remarks

Collapse is based on a vertical depth of 500 ft, a mud weight of 9.0 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:

Bonneville 16 State # 201H

Operator: Tascosa Energy Partners, LLC
String type: Intermediate Casing (3,000)

Eddy County, New Mexico. SHL= 1,290 FNL & 250 FWL, Sec 16, T20S, R27E BHL = 660 FNL & 100 FEL, Sec 16, T20S, R27E,

Design par	rameters:			Minimum	design facto	ors:	Environment: H2S considered? No			
Mud weight:			9.50	ppg	DF	1.125	Surface tem		75.00	°F
•	sed on evacu	ated pipe.		113			BH Temp	•	99	°F
							Temp Gradi	ent	0.80	°F/100ft
							Minimum Se	J	1500	ft
					Burst:		Minimum Dr		8.75	in
					DF	1.15	Cement top:		Surface	
<u>Burst</u>										
Max anticipa	ted surface									
pressure:			1,902.00	psi						
Internal gradient: 0.12			psi/ft	Tension:		Non-directio	nal string.			
Calculated B	HP		2,262.00	psi	8 Rd STC:	1.80	(J)			
					8 Rd LTC:	1.80	(J)			
No backup n	nud specified.	•			Buttress:	1.60	(J)			
					Premium:	1.50	(J)			
				Body yield:	1.50	(B)		uent strings		
			Ti i-			Next setting		12,818		
				Neutral pt:	based on buoy	rea wgi. ft	Next setting Next mud w		,	ft TVD ppg
				Neutrai pt.	pt. ±2576 It		Next setting	0	3,893	
							Fracture mu		13.5	
							Safety Factor		1 ppg	
							Fracture dep	-	3000	
							Injection pre		2,262	psi
Run	Segment		Nominal		End	True Vert	Measured	Drift	ID	Internal
Seq	Length	Size	Weight	Grade	Finish	Depth	Depth	Diameter	Diameter	Capacity
004	(ft)	(in)	(lbs/ft)	0.000		(ft)	(ft)	(in)	(in)	(bbls)
1	3000	9.625	36	J-55	LT&C	3000	3000	8.796	8.921	232
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension	
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strength	Design	
	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(Kips)	(Kips)	Factor	
1	1482	2020	1.36	1902	3520	1.85	108	453	4.19 J	
	Prepared			Phone: (432) 695 6970			Date: 05/02/22			
	by:	Richard Wrig	ght		FAX: (432) 6	95 6973		Midland, Te	xas	

Remarks

Collapse is based on a vertical depth of 3,000 ft, a mud weight of 9.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Bonneville 16 State # 201H Well name:

Operator: Tascosa Energy Partners, LLC

String type: Production Casing (± 11,509 ft MD) "FRAC"

Eddy County, New Mexico. SHL= 1,290 FNL & 250 FWL, Sec 16, T20S, R27E

BHL = 660 FNL & 100 FEL, Sec 16, T20S, R27E,

Design parameters:		Minimum d	lesign factors:		Environment:	
Collapse			Collaps	<u>e:</u>	H2S considered?	No
Mud weight:		9.50 ppg	[OF 1.125	Surface temperature:	75.00 °F
Design is based on evacuated pip	e.				Bottom hole temp:	141 °F
					Temperature gradient:	0.80 °F/100ft
					Minimum section lgth:	2,500 ft
			Burs	st:	Minimum Drift:	4.653 in
			[DF 1.12	Cement top:	Surface ft
<u>Burst</u>						
Max anticipated surface						
pressure FRAC @ RATE:	10,000.00 psi					
Internal gradient:	0.000 psi/ft	Tension:			Directional Info - Build & H	Hold
Calculated BHP	10,000.00 psi	8 Rd STC:	1.80	(J)	KOP #1 ±	1,500 ft
backup mud specified.	0.000 psi/ft	8 Rd LTC:	1.80	(J)	KOP #2 ±	6,038 ft
Net Injection Pressure Surface	10,000.00 psi	Buttress:	1.60	(J)	Departure at shoe:	4,969 ft
Net Injection Pressure TVD	5,606.00 psi	Premium:	1.50	(J)	Maximum dogleg:	10 °/100ft
Annular surface PSI	0 psi	Body yield:	1.50	(B)	Inclination at shoe:	86.32 °
Frac Gradient	12.50 ppg					
Frac Gradient	0.65 psi/ft	Tension is ba	sed on buoyed w	eight. (.8547	'4 factor)	
		Neutral pt:	± 5,515 ft assu	mes no fric	tion calc from mid pt of curv	/e

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	ID Diameter (in)	Internal Capacity (bbls)
1	11,509	5.5	20	CYP-110	BTC Semi Prem	6,760	11,509	4.653	4.778	256.0
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor	
1	3,339	12200	3.65	10000	12360	1.236	330 100K over p	641 ull at TD	1.94 yield	
	Prepare b	ed oy: Richard Wriç	ght		Phone: (432) 695 FAX: (432) 695 69		Date:	05/02/22 Midland, Tex	kas	

Collapse is based on a vertical depth of 6,760 ft, a mud weight of 9.5 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a tensile load which is added to the axial load

Intent		As Dril	led											
API#														
Ope	rator Nar	ne:				Prope	erty N	lame:						Well Number
Kick C	off Point	(KOP)												
UL	Section	Township	Range	Lot	Feet	F	From N	I/S	Feet		From	n E/W	County	
Latitu	de				Longitu	ıde							NAD	
First T	ake Poin	t (FTP)												
UL	Section	Township	Range	Lot	Feet	F	From N	I/S	Feet		Fron	n E/W	County	
Latitu	de de				Longitu	ıde							NAD	
Last T	ake Poin	t (LTP)												
UL	Section	Township	Range	Lot	Feet	From	N/S	Feet		From I	E/W	Count	У	
Latitu	de				Longitu	ıde		ı				NAD		
ls this If infil	well an i	defining vinfill well?						_	vell ni	umber	for [Definir	ng well fo	r Horizontal
Ope	rator Nar	ne:	I			Prope	erty N	lame	:					Well Number
Estim	ated For	mation Top	os											
Form	ation:				Тор:		For	matio	n:					Тор:

Bonneville 16 State 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 unmanned 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)

contacteu)	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	IUMBERS:		
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
Artacia Dalias Dant			575 746 5001
Artesia Police Dept Artesia Fire Dept			575 746 5001 575 746 5001
Artesia i ile Dept			373 740 300 1
Carlsbad Police Dept			575 885 2111
Carlsbad Fire Dept			575 885 3125
Loco Hills Police Dept			575 677 2349
Jal Police Dept			575 395 2501
Jal Fire Dept			575 395 2301 575 395 2221
Gai. 1.10 20pt			0.000 111.
Jal ambulance			575 395 2221
Eunice Police Dept			575 394 0112
Eunice Fire Dept			575 394 3258

Eunice Ambulance		575 394 3258
Hobbs Police Dept		
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

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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.

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- 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

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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:

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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.

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- 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:

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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.

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- 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.

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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	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	4 ppm/hr	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.

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:

CONCE	NTRATION	PHYSICAL EFFECTS
.001%	10 PPM	Obvious and unpleasant odor. Safe for 8 hour exposure
		Con across for like a mantage and across and
.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.
200/	000	
.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.



Bonneville 16 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 DCP 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 (DCP).
- 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

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

I. Operator:	Tascosa Ene	ergy Partners, LLC.	OGRID:	329748	Date:	08/231	/2022
II. Type: ⊠ Origi	nal 🗆 Amendm	nent due to □ 19.15.27	.9.D(6)(a) NMA	C □ 19.15.27.9.D((6)(b) NMAC □ (Other.	
If Other, please de	scribe:						
		g information for each pad or connected to a c			wells proposed to	be drille	d or proposed to
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Prod	nticipated luced Water BBL/D
Bonneville 16 State #20	O1H	D-16-20S-27E	1290 FNL,250 FWI	510	2040		610
	chedule: Provid	e:Catalina 30_ le the following inform a single well pad or a Spud Date		ew or recompleted	nt.	ls propos	-
			Date	Commencement	Date Back D	ate	Date
Bonneville 16 State #2	01H	11/15/2022	12/10/22	03/01/2023	04/01/20)23	04/05/2023
VII. Operational Subsection A throu	Practices: ☑ A ugh F of 19.15.2 gement Practice	es: 🛛 Attach a comple	ription of the ac	tions Operator wil	Itake to comply	with the	requirements of

Section 2 – Enhanced Plan EFFECTIVE APRIL 1, 2022

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. \square 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	capacity to gather	100% of the anticipated	l natural gas
production volume from the well	prior to the date of first prod	luction.			

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	d 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 informa	tion
for which confidentiality is asserted and the basis for such assertion.	

(i)

Section 3 - Certifications Effective May 25, 2021

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; fuel cell production; and (h)

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.

- (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: 08/08/2022
Phone: 720-244-4417
OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval: