Office Office	State of New Me	exico	DHC 5 240	Form C-103
<u>District I</u> – (575) 393-6161	Energy, Minerals and Natur	ral Resources	DHC-5319	Revised July 18, 2013
1625 N. French Dr., Hobbs, NM 88240 District II – (575) 748-1283			WELL API NO. 30-039-23265	
811 S. First St., Artesia, NM 88210	OIL CONSERVATION		5. Indicate Type of	I ease
<u>District III</u> – (505) 334-6178 1000 Rio Brazos Rd., Aztec, NM 87410	1220 South St. Fran		STATE	FEE
<u>District IV</u> – (505) 476-3460	Santa Fe, NM 87	7505	6. State Oil & Gas I	Lease No.
1220 S. St. Francis Dr., Santa Fe, NM 87505			NMSF078771	
	ES AND REPORTS ON WELLS		7. Lease Name or U	nit Agreement Name
(DO NOT USE THIS FORM FOR PROPOSA DIFFERENT RESERVOIR. USE "APPLICA			DOCA UNIT	
PROPOSALS.)			ROSA UNIT 8. Well Number 098	R
71	as Well 🛛 Other			
2. Name of Operator LOGOS OPERATING LLC			9. OGRID Number	289408
3. Address of Operator			10. Pool name or W	ildcat
2010 AFTON PLACE, FARMING	ΓΟN, NM 87401		MANCOS/DAKOT	Γ A
4. Well Location				
Unit LetterL::	1840 feet from the _S line	andfe	et from theWl	ine
Section 23 Township	31N Range 6W			RIO ARRIBA
	11. Elevation (Show whether DR,	RKB, RT, GR, etc.,)	
	GL: 6267			
12 Check An	propriate Box to Indicate Na	ature of Notice	Report or Other D	ata
•			•	
NOTICE OF INT	_		SEQUENT REPO	
	PLUG AND ABANDON CHANGE BLANC	REMEDIAL WOR		LTERING CASING
	CHANGE PLANS MULTIPLE COMPL	COMMENCE DRI		AND A
DOWNHOLE COMMINGLE	WIOLTIFLE COWIFL	CASING/CEIVIEN	1 100	
CLOSED-LOOP SYSTEM				
OTHER:		OTHER:		
 Describe proposed or complet of starting any proposed work proposed completion or recon 	t). SEE RULE 19.15.7.14 NMAC			
	-			
Pre-approved Pool Division Order R-13122. Pools to be commingled: Basin Mancos (97232) and Basin Dakota (71599)				
Pools to be commingled: Basin Mancos (97232) and Basin Dakota (71599) Perforated Intervals:				
Basin Mancos: 6310'- 7592'				
Basin Dakota: 7779' - 7921'				
1 0	ased upon production date 15% B			s is based upon the
Commingling will not reduce	e Basin Mancos and Basin Dakota the value of reserves.	a production zones	within the Well.	
	unit have not been notified of the	e intent of the down	hole commingle per o	rder R-12991. BLM ha
been notified on sundry notice			5 1	
				7
pud Date:	Rig Release Da	ite:		
		L		_
hereby certify that the information ab	ove is true and complete to the be	est of my knowleds	e and helief	
nereby certify that the information ab	ove is true and complete to the be	isi of my knowledge	e and utilei.	
5	/ 11			
ignature <u>Dacye Sh</u>	<i>'ull</i> TITLE I	Regulatory Techni	<u>cian</u> DATE	07/31/2023
ype or print nameDacye Shull_				787-2027
or State Use Only				
PPROVED BY: Dean R Conditions of Approval (if any): 02:02:02	Molline TITLE Petrol	eum Engineer	DATE	08/25/2023
onditions of Approval (if any);				
asea to 1maging: 8/25/2025/1:02:02	(FIVI			

CONDITIONS OF APPROVAL

If an alteration is made to the Well or a condition within the Well changes which may cause the allocation of production to the Pools as approved within this Permit to become inaccurate, then no later than sixty (60) days after that event, the Operator shall submit Form C-103 to the OCD Engineering Bureau describing the event and include a revised allocation plan. If OCD denies the revised allocation plan, this Permit shall terminate on the date of such action.

If the downhole commingling of the Pools reduces the value of the oil and gas production to less than if it had remained segregated, no later than sixty (60) days after the decrease in value has occurred the Operator shall submit a new downhole commingling application to OCD to amend this Permit to remove the pool that caused the decrease in value. If the Operator fails to submit a new application, this Permit shall terminate on the following day, and if OCD denies the application, this Permit shall terminate on the date of such action.

If a completed interval of the Well is altered from what is submitted within this application, then no later than sixty (60) days after the alteration, the Operator shall submit Form C-103 to the OCD Engineering Bureau detailing the alteration and completed interval.

Form 3160-5 (June 2019)

UNITED STATES DEPARTMENT OF THE INTERIOR

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 202

BUREAU OF LAND MANAGEMENT			5. Lease Serial No.	NMSF078771	
SUNDRY N Do not use this f abandoned well. U	to re-enter ar	l	or Tribe Name		
SUBMIT IN T	FRIPLICATE - Other instructions on pa	nge 2	_	eement, Name and/or No.	
1. Type of Well	·	<u>-</u>		A UNITDK/NMNM78407B, NMNM78	
Oil Well Gas W	Vell Other		8. Well Name and No	ROSA UNIT/98	
2. Name of Operator LOGOS OPERA	TING LLC		9. API Well No. 3003	3923265	
			′	10. Field and Pool or Exploratory Area BLANCO/Blanco Mesaverde	
4. Location of Well (Footage, Sec., T.,R SEC 23/T31N/R6W/NMP	.,M., or Survey Description)		11. Country or Parish RIO ARRIBA/NM		
12. CHE	CK THE APPROPRIATE BOX(ES) TO II	NDICATE NATUR	E OF NOTICE, REPORT OR OT	HER DATA	
TYPE OF SUBMISSION		TY	YPE OF ACTION		
✓ Notice of Intent	= =	epen draulic Fracturing	Production (Start/Resume) Reclamation	Water Shut-Off Well Integrity	
Subsequent Report		w Construction g and Abandon	Recomplete Temporarily Abandon	✓ Other	
Final Abandonment Notice	Convert to Injection Plu	g Back	Water Disposal		
complete, LOGOS will mill out	conduct a wellbore isolation for subjective bridge plug and downhole commin				
14. I hereby certify that the foregoing is DACYE SHULL / Ph: (505) 324-414		Title REGULA	ATORY TECH		
Signature Dacys S	Shull	Date	07/28/2	2023	
	THE SPACE FOR FEI	DERAL OR S	TATE OFICE USE		
Approved by MATTHEW H KADE / Ph: (505) 56	4-7736 / Approved	Peti	roleum Engineer	07/28/2023 Date	
	ned. Approval of this notice does not warra quitable title to those rights in the subject duct operations thereon.	ant or	ARMINGTON		
Title 18 U.S.C Section 1001 and Title 43	3 U.S.C Section 1212, make it a crime for	any person knowin	gly and willfully to make to any d	lepartment or agency of the United States	

any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)



DOWNHOLE COMMINGLE PROCEDURE AND ALLOCATION-NMOCD (2023)

Rosa Unit 98 30-039-23265 1840' FSL & 790' FWL Section 23, T31N, R06W Rio Arriba, New Mexico LAT: 36.8829536° N LONG: -107.4384918° W

PROJECT OBJECTIVE:

Remove packer and set a bridge plug above the Mancos perforations and load the hole to protect the wellbore during offset completions. Once offset completions are complete, mill the bridge plug and downhole commingle Mancos and Dakota.

Mancos/Dakota

WORKOVER PROCEDURE:

- 1. Hold safety meeting. MIRU workover rig. Place fire and safety equipment in strategic locations. Comply with all LOGOS, BLM, and NMOCD rules and regulations.
- 2. Lay flow lines. Check and record casing and tubing pressures. Sell pressure down to line. Kill well if necessary.
- 3. Nipple down wellhead and nipple up BOP.
- 4. Pull tubing and packer out of hole and lay tubing down.
- 5. Set bridge plug within 50' of the Mancos perforations and load the hole with KCL water. SI well for offset completions.
- 6. Once offset completions are complete, trip in hole and mill the bridge plug.
- 7. Run in hole with single 2-3/8" production tubing string.
- 8. Return to production as a Mancos/Dakota commingle.

PRODUCTION ALLOCATION

Historic production data from both zones in this well was gathered and analyzed. Cumulative production is not an applicable allocation method in this case; therefore, production rates were used to determine production allocation.

Total Gas Production Rate 117 Mcfd MC Gas Production Rate 17 Mcfd DK Gas Production Rate 100 Mcfd

MC allocation = MC rate/total rate = 17/117 = 15% DK allocation = DK rate/total rate = 100/117 = 85%

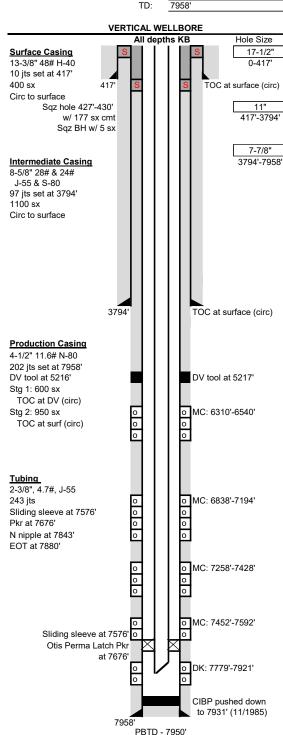


Wellbore Schematic

Surface Casing: (9/14/1983)

Well Name:	Rosa Unit 098	
Location:	L-23-31N-06W 184	10' FSL & 790' FWL
County:	Rio Arriba, NM	
API #:	30-039-23265	
Co-ordinates:	Lat 36.8829536, Long	-107.4384918 NAD1983
Elevations:	GROUND:	6267'
	KB:	6279'
Depths (KB):	PBTD:	7950'
	TD	70501

Date Prepared:	7/10/2023 Moss
Reviewed By:	7/11/2023 Peace
Last Updated:	
Spud Date:	9/13/1983
Completion Date:	12/21/1983
Last Workover Date:	11/15/1985



Drilled a 17-1/2" surface hole to 417'. Set 10 jts 13-3/8", 48#, H-40 csg at 417'. Cmt'd w/ 400 sx Class B cmt (480 ft3, 15.6 ppg). Circ 20 bbls cmt to surface. Intermediate Casing: (10/5/1983) Drilled an 11" intermediate hole to 3794'. Set 97 jts 8-5/8" csg at 3794'. (15 jts 28# J-55

70 jts 24# J-55, 12 jts 28# S-80). Cmt'd w/ 300 sx Class B 65/35 poz w/ 6% gel (12.2 ppg). Tailed w/ 600 sx Class B 50/50 poz w/ 6% gel (13.3 ppg) & 200 sx Class B cmt (15.6 ppg). Circ 40 bbls to surface

Production Casing: (10/25/1983) Drilled a 7-7/8" production hole to 7958'. Set 202 jts 4-1/2", 11.6#, N-80 csg at 7958' DV tool at 5217'. Cmt stg 1 w/ 500 sx Class B 50/50 poz cmt (13.3 ppg) followed by 100 sx Class B neat cmt (15.6 ppg). Circ 20 bbls. Cmt'd Stg 2 w/ 850 sx Class B 65/35 poz cmt (12.2 ppg) followed by 100 sx Class B neat (15.6 ppg) cmt. Circ 20 bbls to surf 11/1985: Identified csg hole from 427'-430'. Sqz'd w/ 120 sx (140 ft3) Class B cmt, circ to surf. Hesitation sqz w/ another 57 sx (67ft). BH wouldn't hold pressure so sqz'd w/ 5 sx (5.9 ft3) cmt.

Tubing: (11/1985)	L	Length (ft)	
KB		12	
(234) 2-3/8" 4.7# J-55 8rd tbg jts		7564	
(1) Sliding Sleeve - X profile at 7576'		3	
(3) 2-3/8" 4.7#, J-55 8rd tbg jts		97	
(1) Otis Perma Latch Packer at 7676'		6	
(5) 2-3/8" 4.7#, J-55 8rd tbg jts		162	
(1) 1.79" N Nipple at 7843'		1	
(1) 2-3/8" 4.7#, J-55 8rd tbg jt		32	
(1) MS collar w/ exp check		4	
·	Set at:	7880 ft	

Artificial	Lift

Perforations: (12/1983)

DK: (7779'-7921): 2 SPF, 80, 0.38" holes. 7779'-7797', 7827'-7838', 7868'-7872', & 7914'-7921'

Frac w/ 205,000# 20/40 sand in 95,000 gal 50# x-link gel

MC: (7452'-7592'): 1 SPF, 140, 0.38" holes. Frac'd this zone multiple times.

1st frac: H2O frac w/ 50,000 gal 30# x-link gel.

2nd frac: 32,680# of 20/40 sand in 26,340 gal 30# gel. Screened out at 6200 psi

MC: (7258'-7428') 1 SP2F, 86, 0.38" holes

Frac w/ 65,000# 20/40 sand in 95,000 gal 50# x-link gel

MC: (6838'-7194') 1 SP2F, 108, 0.39" holes. 6838'-6862', 6864'-6886', 6888'-6910', 6912'-6934' 6936'-6958', 6960'-6982', 6983'-7003', 7010'-7026', 7028'-7050', 7052'-7074' & at 1 SP2F, 55, 0.29" holes. 7076'-7098', 7100'-7122', 7124'-7146', 7148'-7170, & 7172'-7194'

Frac w/ 150,000# 20-40 sand in 165,000 gal 50# x-link gel.

MC: (6310'-6540') 1 SP2F,105, 0.39" holes. 6310'-6324', 6326'-6348', 6350'-6372',

6374'-6396', 6398'-6416', 6420'-6444', 6446'-6468', 6470'-6492', 6494'-6516', 6518'-6540'

Frac w/ 64,000# 20/40 sand in 89,572 gal 50# x-link gel

Formations:	MD		
Pictured Cliffs	3100'	Greenhorn	7592'
Mesaverde	5277'	Dakota	7823'
Gallup	6310'		

Additional Notes:

12/1983 Initial completion. Perf'd & stim'd MC & DK. CO to PBTD 7950'. Set pkr at 7691

& sliding sleeve at 7590'-7593'. Single 2-3/8" tbg string landed at 7929'

11/1985 Csg Repair. Couldn't release packer at 7691'. Chem cut tbg at 6566'. Jarred pkr free w/ 62k # & pull fish consisting of tbg, sliding sleeve, & pkr. Set BP at 6184' & isolated csg holes between 427'-430'. Sqz w/ 177 sx cmt. DO cmt & PT csg to 1050 psig, held. PT BH to 550 psig, pressured up immeditely. Sqz'd BH w/ 5 sx cmt. PT csg again to 2200#, held. PT BH to 400#, held. DO BP & pushed down to 7931'. Ran 2-3/8" tbg w/ pkr & sliding sleeve. EOT at 7880'.

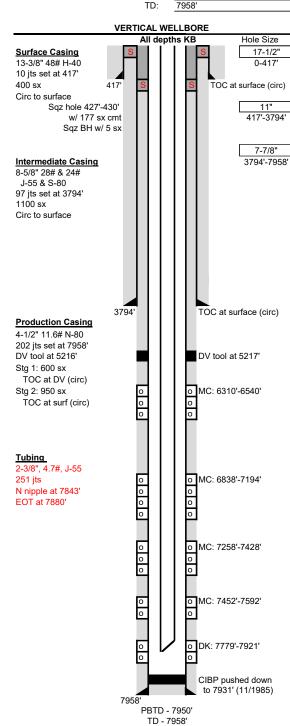
TD - 7958'



Proposed Wellbore

Well Name:	Rosa Unit 098	
Location:	L-23-31N-06W 184	10' FSL & 790' FWL
County:	Rio Arriba, NM	
API #:	30-039-23265	
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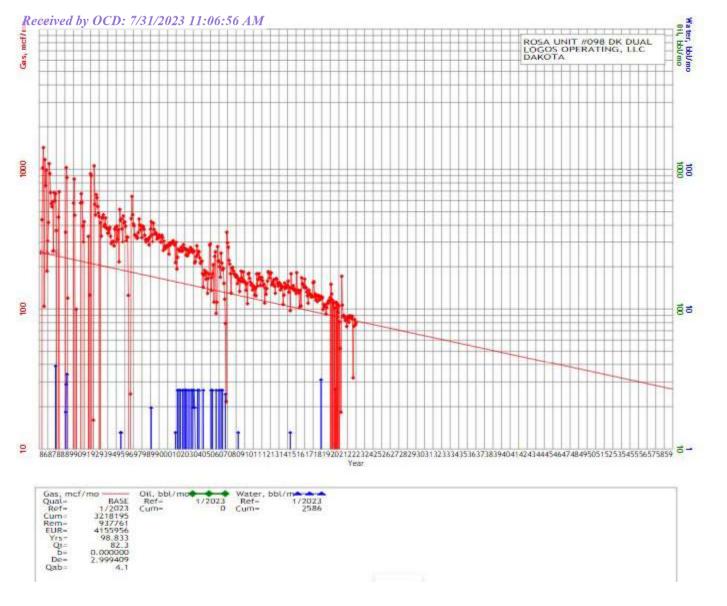


Drilled a 17-1/2" o	(9/14/1983) surface hole to 417'. Set :	10 jts 13-3/8", 48#, H-40 csg at 4	117'
		.6 ppg). Circ 20 bbls cmt to surfa	
Intermediate Cas	sing: (10/5/1983)		
		Set 97 jts 8-5/8" csg at 3794'. (1	5 its 28# J-55.
		w/ 300 sx Class B 65/35 poz w/ 6	
		% gel (13.3 ppg) & 200 sx Class	
Circ 40 bbls to s		0 (110/	(110/
Production Casi	ng: (10/25/1983)		
		et 202 jts 4-1/2", 11.6#, N-80 cs	g at 7958'.
		iss B 50/50 poz cmt (13.3 ppg) fo	
		20 bbls. Cmt'd Stg 2 w/ 850 sx 0	
		ass B neat (15.6 ppg) cmt. Circ	
		'. Sqz'd w/ 120 sx (140 ft3) Class	
Hesitation sqz w	/ another 57 sx (67ft). Bh	I wouldn't hold pressure so sqz'o	d w/ 5 sx (5.9 ft3) cr
Tubing:		Length (ft)	
KB		12	
(249) 2-3/8" 4.7#		7803	
(1) 2-3/8" x 2' pup		2	
(1) 2-3/8" 4.7# J-5		31	
(1) 1.79" N Nipple		1	
(1) 2-3/8" tbg jt w	/ 1/2 MS w/ exp check	31	
NA	2/4092)		
Perforations: (12		7779'-7797' 7827'-7838' 7868'	-7872' & 7914'-792
Perforations: (12 DK: (7779'-7921)	: 2 SPF, 80, 0.38" holes.	7779'-7797', 7827'-7838', 7868'-	-7872', & 7914'-792
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000	: 2 SPF, 80, 0.38" holes. # 20/40 sand in 95,000 g	al 50# x-link gel	
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000 MC: (7452'-7592'	: 2 SPF, 80, 0.38" holes. # 20/40 sand in 95,000 g): 1 SPF, 140, 0.38" hole	al 50# x-link gel s. Frac'd this zone multiple time:	
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000 MC: (7452'-7592' 1st frac: H2O fra	: 2 SPF, 80, 0.38" holes. # 20/40 sand in 95,000 g (): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin	al 50# x-link gel s. Frac'd this zone multiple time: k gel.	S.
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000 MC: (7452'-7592' 1st frac: H2O fra 2nd frac: 32,680	: 2 SPF, 80, 0.38" holes. # 20/40 sand in 95,000 g (): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin # of 20/40 sand in 26,344	al 50# x-link gel s. Frac'd this zone multiple time: k gel. 0 gal 30# gel. Screened out at 62	S.
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000 MC: (7452'-7592' 1st frac: H2O fra 2nd frac: 32,680 MC: (7258'-7428'	: 2 SPF, 80, 0.38" holes. # 20/40 sand in 95,000 g): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin # of 20/40 sand in 26,340 1) 1 SP2F, 86, 0.38" holes	al 50# x-link gel s. Frac'd this zone multiple time: k gel. 0 gal 30# gel. Screened out at 63 s.	S.
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000 MC: (7452'-7592' 1st frac: H2O fra 2nd frac: 32,680 MC: (7258'-7428' Frac w/ 65,000#	: 2 SFF, 80, 0.38" holes. # 20/40 sand in 95,000 g): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin # of 20/40 sand in 26,344) 1 SPZF, 86, 0.38" holes 20/40 sand in 95,000 gal	al 50# x-link gel s. Frac'd this zone multiple time: k gel. 0 gal 30# gel. Screened out at 63 s.	s. 200 psi.
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000 MC: (7452'-7592' 1st frac: H2O fra 2nd frac: 32,680 MC: (7258'-7428' Frac w/ 65,000# MC: (6838'-7194'	: 2 SPF, 80, 0.38" holes. # 20/40 sand in 95,000 g): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin # of 20/40 sand in 26,344 (7) 1 SP2F, 86, 0.38" holes 1: 20/40 sand in 95,000 gal (7) 1 SP2F, 108, 0.39" hole	al 50# x-link gel s. Frac'd this zone multiple time: k gel.) gal 30# gel. Screened out at 6: s. l 50# x-link gel.	s. 200 psi. 38'-6910', 6912'-69:
Perforations: (12 DK: (7779-7921) Frac w/ 205,000 MC: (7452'-7592' 1st frac: H2O fra 2nd frac: 32,680 MC: (7258'-7428' Frac w/ 65,000' 6936'-6958', 696'	2 SPF, 80, 0.38" holes. # 20/40 sand in 95,000 g c): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin # of 20/40 sand in 26,34" 0/1 SP2F, 86, 0.38" holes 20/40 sand in 95,000 ga c) 1 SP2F, 108, 0.39" hole 50'-6982', 6983'-7003', 70	al 50# x-link gel s. Frac'd this zone multiple times k gel. 0 gal 30# gel. Screened out at 6: s. I 50# x-link gel. es. 6838'-6862', 6864'-6886', 688	s. 200 psi. 38'-6910', 6912'-69: 974' & at 1 SP2F, 5:
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000 MC: (7452'-7592' 1st frac: H2O frá 2nd frac: 32,680 MC: (7258'-7428' Frac w/ 65,000# MC: (6838'-7194' 6936'-6958', 696 0.29" holes. 707	2 SPF, 80, 0.38" holes. # 20/40 sand in 95,000 g c): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin # of 20/40 sand in 26,34" 0/1 SP2F, 86, 0.38" holes 20/40 sand in 95,000 ga c) 1 SP2F, 108, 0.39" hole 50'-6982', 6983'-7003', 70	al 50# x-link gel s. Frac'd this zone multiple time: k gel. 0 gal 30# gel. Screened out at 6: s. 150# x-link gel. ss. 6838'-6862', 6864'-6886', 688 100'-7026', 7028'-7050', 7052'-70 24'-7146', 7148'-7170, & 7172'-7	s. 200 psi. 38'-6910', 6912'-69: 974' & at 1 SP2F, 5:
Perforations: (12 DK: (7779'-7921) Frac w/ 205,090 MC: (7452'-7592' 1st frac: H2O fra 2nd frac: 32,680 MC: (7258'-7428' Frac w/ 65,000# MC: (6838'-7194' 6936'-6958', 696 0.29" holes. 707 Frac w/ 150,000	: 2 SPF, 80, 0.38" holes. # 20/40 sand in 95,000 g): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin ## of 20/40 sand in 26,344 () 1 SP2F, 86, 0.38" holes 20/40 sand in 95,000 ga) 1 SP2F, 108, 0.39" hole 50'-6982', 6983'-7003', 70 66'-7098', 7100'-7122', 71 ## 20-40 sand in 165,000	al 50# x-link gel s. Frac'd this zone multiple time: k gel. 0 gal 30# gel. Screened out at 6: s. 150# x-link gel. ss. 6838'-6862', 6864'-6886', 688 100'-7026', 7028'-7050', 7052'-70 24'-7146', 7148'-7170, & 7172'-7	s. 200 psi. 38'-6910', 6912'-69: 174' & at 1 SP2F, 5: 194'.
Perforations: (12 DK: (7779'-7921) Frac w/ 205,7592' 15t frac: H2O fra 2nd frac: 32,680 MC: (7258'-7428' Frac w/ 65,000# MC: (6838'-7194' 6936'-6958', 696 0.29" holes. 707 Frac w/ 150,000 MC: (6310'-6540'	2 SFF, 80, 0.38" holes. # 20/40 sand in 95,000 g): 1 SFF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin # of 20/40 sand in 26,34"): 1 SP2F, 86, 0.38" holes 20/40 sand in 95,000 ga): 1 SP2F, 108, 0.39" hole 50'-6982', 6983'-7003', 70 66'-7098', 7100'-7122', 71 # 20-40 sand in 165,000): 1 SP2F, 105, 0.39" hole	al 50# x-link gel s. Frac'd this zone multiple time: k gel. 0 gal 30# gel. Screened out at 6: s. 1 50# x-link gel. es. 6838'-6862', 6864'-6886', 688 110'-7026', 7028'-7050', 7052'-70 24'-7146', 7148'-7170, & 7172'-7 gal 50# x-link gel.	s. 200 psi. 38'-6910', 6912'-69: 074' & at 1 SP2F, 5: '194'. 50'-6372',
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000 MC: (7452'-759 1st frac: H2O fra 2nd frac: 32,680 MC: (7258'-7428' Frac w/ 65,000# MC: (6838'-7194' 6936'-6958', 697 Frac w/ 150,000 MC: (6310'-6540' 6374'-6396', 635	2 SFF, 80, 0.38" holes. # 20/40 sand in 95,000 g): 1 SFF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin # of 20/40 sand in 26,34"): 1 SP2F, 86, 0.38" holes 20/40 sand in 95,000 ga): 1 SP2F, 108, 0.39" hole 50'-6982', 6983'-7003', 70 66'-7098', 7100'-7122', 71 # 20-40 sand in 165,000): 1 SP2F, 105, 0.39" hole	al 50# x-link gel s. Frac'd this zone multiple time: k gel. 0 gal 30# gel. Screened out at 6: s. l 50# x-link gel. es. 6838'-6862', 6864'-6886', 686 110'-7026', 7028'-7050', 7052'-70 24'-7146', 7148'-7170, & 7172'-7 gal 50# x-link gel. es. 6310'-6324', 6326'-6348', 635 46'-6468', 6470'-6492', 6494'-65	s. 200 psi. 38'-6910', 6912'-69: 074' & at 1 SP2F, 5: '194'. 50'-6372',
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000 MC: (7452'-759 1st frac: H2O fra 2nd frac: 32,680 MC: (7258'-7428' Frac w/ 65,000# MC: (6838'-7194' 6936'-6958', 697 Frac w/ 150,000 MC: (6310'-6540' 6374'-6396', 635	: 2 SPF, 80, 0.38" holes. # 20/40 sand in 95,000 g): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin # of 20/40 sand in 26,344): 1 SPZF, 86, 0.38" holes 20/40 sand in 95,000 gal 0: 1 SPZF, 108, 0.39" hole 50'-6982', 6982', 7003', 70 6'-7098', 7100'-7122', 71 # 20-40 sand in 165,000 0: 1 SPZF, 105, 0.39" hole 08'-6416', 6420'-6444', 64	al 50# x-link gel s. Frac'd this zone multiple time: k gel. 0 gal 30# gel. Screened out at 6: s. l 50# x-link gel. es. 6838'-6862', 6864'-6886', 686 110'-7026', 7028'-7050', 7052'-70 24'-7146', 7148'-7170, & 7172'-7 gal 50# x-link gel. es. 6310'-6324', 6326'-6348', 635 46'-6468', 6470'-6492', 6494'-65	s. 200 psi. 38'-6910', 6912'-69: 074' & at 1 SP2F, 5: '194'. 50'-6372',
Perforations: (12 DK: (7779-7921) Frac w/ 205,000 MC: (7452'-7592' 1st frac: H2O fra 2nd frac: 32,680 MC: (7258'-7428' Frac w/ 65,000' MC: (6338'-7194' 6936'-6958', 696 0.29" holes. 707 Frac w/ 150,000 MC: (6310'-6540' 6374'-6396', 638 Frac w/ 64,000#	2 SFF, 80, 0.38" holes. #20/40 sand in 95,000 g 1): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin wif of 20/40 sand in 26,344 c): 1 SP2F, 86, 0.38" holes: 20/40 sand in 95,000 gal 20: 1 SP2F, 108, 0.39" hole 50'-6982', 6983'-7003', 706'-7098', 7100'-7122', 71 wif 20-40 sand in 165,000 gal 20: 1 SP2F, 105, 0.39" hole 30'-6416', 6420'-6444', 64: 20/40 sand in 89,572 gal	al 50# x-link gel s. Frac'd this zone multiple time: k gel. 0 gal 30# gel. Screened out at 6: s. l 50# x-link gel. es. 6838'-6862', 6864'-6886', 686 110'-7026', 7028'-7050', 7052'-70 24'-7146', 7148'-7170, & 7172'-7 gal 50# x-link gel. es. 6310'-6324', 6326'-6348', 635 46'-6468', 6470'-6492', 6494'-65	s. 200 psi. 38'-6910', 6912'-69: 074' & at 1 SP2F, 5: '194'. 50'-6372',
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000 MC: (7452'-7592' 1st frac: H2O frac 2nd frac: 32,680 MC: (7258'-7428' Frac w/ 65,000# MC: (6838'-7194' 6936'-6958', 696 0.29" holes. 707 Frac w/ 150,000 MC: (6310'-6540' 6374'-6396', 638 Frac w/ 64,000#	2 SFF, 80, 0.38" holes. #20/40 sand in 95,000 g 1): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin bif of 20/40 sand in 26,34" holes: 20/40 sand in 95,000 gal 30# sholes: 20/40 sand in 195,000 gal 30# sholes: 20/40 sholes: 20/40 sand in 165,000 gal 30# sholes: 20/40 sand in 165,000 gal 30# sholes: 20/40 sand in 89,572 gal MD	al 50# x-link gel s. Frac'd this zone multiple times k gel. 0 gal 30# gel. Screened out at 6: s. I 50# x-link gel. ss. 6838'-6862', 6864'-6886', 688 i10'-7026', 7028'-7050', 7052'-70 24'-7146', 7148'-7170, & 7172'-7 gal 50# x-link gel. ss. 6310'-6324', 6326'-6348', 638 i46'-6468', 6470'-6492', 6494'-65 I 50# x-link gel.	s. 200 psi. 38'-6910', 6912'-693 174' & at 1 SP2F, 53' 194'. 50'-6372', 516', 6518'-6540'.
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000 MC: (7452'-7592' 1st frac: H2O frac 2nd frac: 32,680 MC: (7258'-7428'' Frac w/ 65,000# MC: (6838'-7194'' 6936'-6958', 696 0.29" holes. 707 Frac w/ 150,000 MC: (6310'-6540'' 6374'-6396', 636 Frac w/ 64,000# Formations: Pictured Cliffs	: 2 SPF, 80, 0.38" holes. # 20/40 sand in 95,000 g): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin)# of 20/40 sand in 26,344 () 1 SP2F, 86, 0.38" holes 20/40 sand in 95,000 ga) 1 SP2F, 108, 0.39" hole 50'-6982', 6983'-7003', 70' 6'-7098', 7100'-7122', 71 # 20-40 sand in 165,000 () 1 SP2F, 105, 0.39" hole 38'-6416', 6420'-6444', 64 2 20/40 sand in 89,572 ga	al 50# x-link gel s. Frac'd this zone multiple times k gel. 0 gal 30# gel. Screened out at 6; s. 1 50# x-link gel. se. 6838'-6862', 6864'-6886', 688 n0'-7026', 7028'-7050', 7052'-70 24'-7146', 7148'-7170, & 7172'-7 gal 50# x-link gel. se. 6310'-6324', 6326'-6348', 635 46'-6468', 6470'-6492', 6494'-65 I 50# x-link gel. Greenhorn	s. 200 psi. 38'-6910', 6912'-69: 374' & at 1 SP2F, 5: '194'. 50'-6372', 516', 6518'-6540'.
Perforations: (12 DK: (7779'-7921) Frac w/ 205,7592' 1st frac: H2O frac 2nd frac: 32,680 MC: (7258'-7428' Frac w/ 65,000# MC: (6838'-7194' MC: (6838'-7194' Frac w/ 150,000 MC: (6310'-6540' 6374'-6396', 636 Frac w/ 64,000# Formations: Pictured Cliffs Mesaverde	2 SFF, 80, 0.38" holes. # 20/40 sand in 95,000 g): 1 SPF, 140, 0.38" hole ac w/ 50,000 gal 30# x-lin wf of 20/40 sand in 26,344): 1 SPZF, 86, 0.38" holes 20/40 sand in 95,000 gal 0: 1 SPZF, 108, 0.39" hole 20/40 sand in 95,000 gal 0: 1 SPZF, 108, 0.39" hole 50'-6982', 6983'-7003', 70 6'-7098', 7100'-7122', 71 wf 20-40 sand in 165,000 0: 1 SPZF, 105, 0.39" hole 20/40 sand in 89,572 gal MD 3100' 5277' 6310'	al 50# x-link gel s. Frac'd this zone multiple times k gel. 0 gal 30# gel. Screened out at 6; s. 1 50# x-link gel. se. 6838'-6862', 6864'-6886', 688 n0'-7026', 7028'-7050', 7052'-70 24'-7146', 7148'-7170, & 7172'-7 gal 50# x-link gel. se. 6310'-6324', 6326'-6348', 635 46'-6468', 6470'-6492', 6494'-65 I 50# x-link gel. Greenhorn	s. 200 psi. 38'-6910', 6912'-69: 374' & at 1 SP2F, 5: '194'. 50'-6372', 516', 6518'-6540'.
Perforations: (12 DK: (7779'-7921) Frac w/ 205,000 MC: (7452'-7592' 1st frac: H2O frac 2nd frac: 32,680 MC: (7258'-7428' Frac w/ 65,000# MC: (6838'-7194' 6936'-6958', 696 0.29" holes. 707 Frac w/ 150,000 MC: (6310'-6540' 6374'-6396', 636 Frac w/ 64,000# Formations: Pictured Cliffs Mesaverde Gallup Additional Notes	: 2 SPF, 80, 0.38" holes. # 20/40 sand in 95,000 g): 1 SPF, 140, 0.38" hole sc w/ 50,000 gal 30# x-lin # of 20/40 sand in 95,000 gal 30# x-lin # of 20/40 sand in 95,000 gal 30# x-lin 10 SP2F, 86, 0.38" holes 20/40 sand in 95,000 gal 30" holes 20/40 sand in 95,000 gal 30" holes 20/40 sand in 165,000 gal 30" holes 30" -6982', 6983'-7003', 70" 67-7098', 7100"-7122', 71 # 20-40 sand in 165,000 10 SP2F, 105, 0.39" holes 10 SP2F, 105, 0.39" holes 12 SP2F, 105, 0.39" holes 13 SP2F, 105, 0.39" holes 14 SP2F, 105, 0.39" holes 15 SP2F, 105, 0.39" holes 16 SP2F, 105, 0.39" holes 17 SP2F, 105, 0.39" holes 18 SP2F, 105, 0.39" holes 19 SP2F, 105, 0.39" holes 19 SP2F, 105, 0.39" holes 10 SP2F, 105,	al 50# x-link gel s. Frac'd this zone multiple times k gel. 0 gal 30# gel. Screened out at 6; s. 1 50# x-link gel. se. 6838'-6862', 6864'-6886', 688 n0'-7026', 7028'-7050', 7052'-70 24'-7146', 7148'-7170, & 7172'-7 gal 50# x-link gel. se. 6310'-6324', 6326'-6348', 635 46'-6468', 6470'-6492', 6494'-65 I 50# x-link gel. Greenhorn	s. 200 psi. 200 psi. 38'-6910', 6912'-693' 74' & at 1 SP2F, 59' 194'. 50'-6372', 116', 6518'-6540'. 7592' 7823'

between 427'-430'. Sqz w/ 177 sx cmt. DO cmt & PT csg to 1050 psig, held. PT BH to 550 psig, pressured up immeditely. Sqz'd BH w/ 5 sx cmt. PT csg again to 2200#, held. PT BH to 400#,

held. DO BP & pushed down to 7931'. Ran 2-3/8" tbg w/ pkr & sliding sleeve. EOT at 7880'





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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 246036

CONDITIONS

Operator:	OGRID:
LOGOS OPERATING, LLC	289408
2010 Afton Place	Action Number:
Farmington, NM 87401	246036
	Action Type:
	[C-107] Down Hole Commingle (C-107A)

CONDITIONS

Created By	Condition	Condition Date
dmcclure	If an alteration is made to the Well or a condition within the Well changes which may cause the allocation of production to the Pools as approved within this Permit to become inaccurate, then no later than sixty (60) days after that event, the Operator shall submit Form C-103 to the OCD Engineering Bureau describing the event and include a revised allocation plan. If OCD denies the revised allocation plan, this Permit shall terminate on the date of such action.	8/25/2023
dmcclure	If the downhole commingling of the Pools reduces the value of the oil and gas production to less than if it had remained segregated, no later than sixty (60) days after the decrease in value has occurred the Operator shall submit a new downhole commingling application to OCD to amend this Permit to remove the pool that caused the decrease in value. If the Operator fails to submit a new application, this Permit shall terminate on the following day, and if OCD denies the application, this Permit shall terminate on the date of such action.	8/25/2023
dmcclure	If a completed interval of the Well is altered from what is submitted within this application, then no later than sixty (60) days after the alteration, the Operator shall submit Form C-103 to the OCD Engineering Bureau detailing the alteration and completed interval.	8/25/2023