



Attachment to the Site Facility Diagram - Escrito Gallup Unit 10, 27, 28, 29 Tank Battery

Operator: Epic Energy LLC

Escrito Gallup Unit 10, 27, 28, 29 Tank Battery

API - N/A

Lease# NM-014022

ULSTR: A-S20-T24N-R07W

Footages: 350' FNL & 250' FEL

Rio Arriba County, New Mexico

General sealing of valves:

Production phase:

Drain valve DV1 sealed closed.

Sales valve SV1 sealed closed.

Fill Valve FV1 open to produce into specified tank

Sales phase:

The tank from which the sales are being made will be isolated

by sealing closed the drain valve (DV1) and fill valves (FV1)

and removing and recording the seal from (SV1)

during the sale of the specified tank.

The sales valve will be sealed and recorded immediately following the sale.

Drain phase:

The tank from which the drain is being made will be isolated

by sealing closed the sales valves (SV1) and fill valves (FV1)

during the water drain on that tank.

Fuelgas Usage Calculations

Lease Name: Escrito Gallup Unit 10, 27, 28, 29 Tank Battery

API - N/A

Lease# NM-014022

ULSTR: A-S20-T24N-R07W

Rio Arriba County, New Mexico

Pump Unit Engine Table

Engine Type	HP	MCF/D USAGE
C46 ARROW	8.8	2
C-66 ARROW	12.3	2.5
C-96 ARROW	18.8	3.0
Electric	NA	0
KUBOTA 1600	16	2
KUBOTA 3200	32	3.81
KUBOTA (DG-972-E2)	25	2.5
KOHLER 27 hp	25	3
KOHLER 18 hp	16	2
AJAX DP60 (9 1/2 x 12)	60	7.1
AJAX E42 (8 1/2 x 10)	42	5
AJAX EA30 (7 1/2 x 8)	30	3.6
AJAX EA15	15	2
AJAX EA22 (6 1/2 x 8)	22	2.6
None	NA	0

(from Arrow)

(from Arrow)

(from Arrow)

Fuel gas Calculations:

	BTU / scf	% Used
HV from Gas Analysis	1403.7	Burner 10
Elevation	6716	Pilot 100

Vessels

	Burner BTU Rating	mscf/day	Pilot BTU Rating	mscf/day	Total
Separator	250000	0.4	6000	0.10	0.53
Tank #1		0.0		0.00	0.00
Tank #2		0.0		0.00	0.00
Tank #3		0.0		0.00	0.00
Tank #4		0.0		0.00	0.00
Tank #5		0.0		0.00	0.00
Total MSCF/DAY					
		0.43			0.10
					0.53

Horsepower Engine Table

Engine Type	HP (100% Load)	HP (80% Load)	Fuel Consumption
GS-10 - 80hp	80	64	8319
Twin Stars BOSS GM3.0L	32	26	8500
Gemini G26	26	21	8000
Twin Stars 5.9 Cummins	49	39	8725
Twin Stars 5.9 Cummins	84	67	8056
Twin Stars 5.9E Cummins	84	67	8422
GS12 (8.3 nat asp cummins)	118	94	8553
GS17 (8.3 Turbo Cummins)	175	140	7560
GS24 (855 Turbo)	281	225	8617
496 and 454 Chevy - 110	110	88	8500
460 Ford	85	68	8000
300 6 cyl Ford	65	52	8650
8.3 Cummins (natural aspirated)	118	94	8553
8.3E Cummins (natural aspirated)	118	94	8933
8.3 Cummins (turbo charged)	175	140	7560
855 Cummins (turbo)	281	225	8617
KTA19GC	420	336	7961
KTA19GC-SLB	420	336	8172
FLUID COMP GM-350	80	64	8319
3304 CATERPILLAR	95	76	7778
VRG-330 ARROW/WAKESHAU	68	54	8038
KAWASAKI(Poquito) - 750	15	12	8350
KUBOTA (DG-972-E2)	23.6	19	8000
VRG-220 ARROW/WAKESHAU	52	42	8250
KOHLER - 18hp	18	14	8500
KOHLER - 27hp	27	22	8500
Electric			0
None			0

(Estimated)

(Estimated)

(Estimated)

(Estimated)

(Estimated)

Engines

Compressor Engine	None
Pump Unit Engine	None
HP Rating @ 80% Load (D)	
Fuel Consumption (E)	0
Pump Jack mcf/day (B)	0.0
De-Rating % for Elevation	0.0366
De-Rated HP @ 80% Load	0.0

Total MSCF/DAY	0.00
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Other Use

	mscf/day	
House Tap	0	
Chemical Injection Pumps	0	
Auxillary Equipment		combuster

Total Fuel Gas to Report	0.53	mscf/day
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Fuel gas calculations methodology:

Fuel gas is calculated by using the BTU rating of the gas (wet rating) that has been determined via gas analysis, the elevation of the well (due to derating of HP), separator burner rating, natural gas engines located on location with the manufacturer HP rating at 80% load which is the maximum recommended continuous run rating HP from the manufacturers.

Main Burner gas usage calculation - (((burner BTU-hr/Actual BTU)*24/1000)*(Time % factor/100) = Gas used by main burner
 Pilot Burner gas usage calculation - (((burner BTU-hr/Actual BTU)*24/1000)*(Time % factor/100) = Gas used by main burner
 Pump unit engine - fuel usage per manufacturer specs if available, if not, calculated per HP calculations comparabel to compressor calcs
 Compressor fuel usage -

calculated by derating engine for the elevation - (HP Rating @ 80% Load)*(1-((Elevation-2000)/1000)*(Elevation derating factor for naturally aspirated or turbo charged engines)
 then using the following formula - ((Engine fuel usage from manufacturer/BTU from gas analysis)*Elevation derated HP)*24/1000

Fuel usage for all equipment is then summed for the site.

REFERENCES:		
De-Rating for Elevation Change	2.44%	Turbo Charged Engines
(every 1000' above 2000' elevation)	3.66%	Naturally Aspirated
6000 BTU is avg value to use for Pilot Calculations for Vessels		
How to Use: All Blue Text Cells require some kind of manual data entry, either by typing the value in, or selecting from a drop down menu (Engines Calculation Table).		
The Red Text Cells are calculated values. The total fuel gas to be reported for the lease		

Fuel gas calculations methodology:

Fuel gas is calculated by using the BTU rating of the gas (wet rating) that has been determined via gas analysis, the elevation of the well (due to derating of HP), separator burner rating, natural gas engines located on location with the manufacturer HP rating at 80% load which is the maximum recommended continuous run rating HP from the manufacturers.

Main Burner gas usage calculation - $\left(\frac{\text{burner BTU-hr/Actual BTU} \times 24}{1000}\right) \times (\text{Time \% factor}/100) = \text{Gas used by main burner}$

Pilot Burner gas usage calculation - $\left(\frac{\text{burner BTU-hr/Actual BTU} \times 24}{1000}\right) \times (\text{Time \% factor}/100) = \text{Gas used by main burner}$

Pump unit engine - fuel usage per manufacturer specs if available, if not, calculated per HP calculations

Compressor fuel usage -

calculated by derating engine for the elevation - $(\text{HP Rating @ 80\% Load}) \times (1 - ((\text{Elevation} - 2000)/1000)) \times (\text{Elevation factor})$

then using the following formula - $((\text{Engine fuel usage from manufacturer}/\text{BTU from gas analysis}) \times \text{Elevation factor})$

Fuel usage for all equipment is then summed for the site.

ation derating factor for naturally aspirated or turbo charged engines)

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
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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
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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

QUESTIONS

Action 77220

QUESTIONS

Operator: EPIC ENERGY, L.L.C. 332 Road 3100 Aztec, NM 87410	OGRID: 372834
	Action Number: 77220
	Action Type: [UF-FAC] TB Registration (TB-REG)

QUESTIONS

Facility Details <i>Please answer all of the questions in this group.</i>	
Name of the facility	Escrito Gallup Unit 10, 27, 28, 29 TB
Date the facility was opened	Not answered.
Depth to ground water, if known	Not answered.

Verification	
Does the operator have other facilities with a matching name	No
Are there other facilites located within approximately 50 feet	No

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ACKNOWLEDGMENTS

<input checked="" type="checkbox"/>	I certify that I am authorized to register a facility on behalf of the responsible operator.
<input checked="" type="checkbox"/>	I certify that I will notify OCD of any changes of ownership for this facility.
<input checked="" type="checkbox"/>	I certify that I will notify OCD when this facility is closed.