- Form 3160-5 (August 2007)	August 2007) UNITED STATES HECEIVED DEPARTMENT OF THE INTERIOR ELECTRONIC REPORT BUREAU OF LAND MANAGEMENT					OMB NO	APPROVED 0. 1004-0135 July 31, 2010
	Do not use th	NOTICES AND REPORT is form for proposals to dri II. Use form 3160-3 (APD)	m or to re	-enter an	2015	751141038 6. If Indian, Allottee of	
		· · · · · · · · · · · · · · · · · · ·	PUDE	AU OF LAND MAI	WAGEMENT	UTE MOUNTAI	N UTE
	SUBMIT IN TRI	PLICATE - Other instructio	ons on rev	erse side.			
1. Type of Well	🗅 Gas Well 🔲 Oth	ner				8. Well Name and No. HARRIS HAWK 20-1	
2. Name of Operate	or	Contact: CH S COLO E-Mail: ccampbell@p	IRISTINE alomarnr.co			9. API Well No. 30-045-35631-0	0-X1
3a. Address 8100 SOUTH LITTLETON,	8100 SOUTHPARK WAY, SUITE A1 Ph: 303-668-8318 LITTLETON, CO 80127				10. Field and Pool, or VERDE GALLU		
	4. Location of Well (Footage, Sec., T., R., M., or Survey Description)				11. County or Parish, a	nd State	
Sec 20 T31N R14W NWSE 1980FSL 1980FEL 36.884645 N Lat, 108.330312 W Lon				SAN JUAN COL	JNTY, NM		
12	. CHECK APP	ROPRIATE BOX(ES) TO II	NDICATE	ENATURE OF 1	NOTICE, R	EPORT, OR OTHE	R DATA
TYPE OF SU	JBMISSION			TYPE O	F ACTION		· · · ·
□ Notice of Intent □ Acidize □ Deepen □ Produc			ion (Start/Resume)	U Water Shut-Off			
Subsequent		Alter Casing	_	cture Treat	🗖 Reclam		U Well Integrity
-		Casing Repair Change Plans		v Construction	C Recomp		Other
	lonment Notice	Convert to Injection		g and Abandon g Back	U Vater I	arily Abandon Disposal	
determined that Bridgecreek I Harris Hawk We have not these vendor	the site is ready for fi Resources (CO), 20-1 for approval finalized negotial	LLC respectfully submits the tions with a vendor (Hallibur ing the frac job on this well u	e proposed	d chemical list fo aker Hughes), bu	r the frac on	the	
We are antici	pating the frac to	begin mid-March 2015, wea	ather depe	ndent.		MAR 1 9 2015	
		OIL CONS. DIV D MAR 3 0 201				ios Field Office of Land Manage	ment
14. I hereby certify Name (Printed/1		s true and correct. Electronic Submission #293 For BRIDGECREEK RE nitted to AFMSS for processin NE CAMPBELL	ESOURCES	CÓLO LLC, sen ARA TELECKY o	it to the Dura	ngo 5 (15BDT0145SE)	· · · ·
Signature	(Electronic S	Submission)		Date 02/27/2	2015		
		THIS SPACE FOR	FEDER	L OR STATE	OFFICE U	SE	
_Approved By				Title			Date
Conditions of approv certify that the applic	ant holds legal or equ	d. Approval of this notice does no uitable title to those rights in the su act operations thereon.		Office			
		U.S.C. Section 1212, make it a cristatements or representations as to				ake to any department or	agency of the United
	** BLM REV	ISED ** BLM REVISED *	* BLM R	EVISED ** BLI	VI REVISEI	O ** BLM REVISEI	D **
				NM	DCD		7

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Proposal No: 118250127B

Palomar Natural Resources PRAIRIE FALCON 19 #1

API # 30-045-35628-0000 VERDE Field 19B-31N-14W San Juan County, New Mexico February 24, 2015

Well Proposal

Prepared for: Dan Gralla VP NORTH AMERICAN OPERATIONS Palomar Natural Resources **Prepared by:** Patricia V Cabrera Area Engineer

 Service Point:

 PP, FARMINGTON

 Bus Phone:
 505-3276222

 Fax:
 505-327-5766

Powered by PowerVision

Service Representatives: Katherine Thompson Ferguson Account Manager Operator Name: Well Name: Job Description: Date: Palomar Natural Resources PRAIRIE FALCON 19 #1 Stage 1 -70Q -Linear N2 Foam -51k Sand Brown February 24, 2015



Proposal No: 118250127B

JOB AT A GLANCE

Surface Treating Pressure (max)	2,715 psi
Slurry HHP (avg)		629 hhp
Total Rate (max)		25.00 bpm
Slurry Rate (max)		25.00 bpm
Nitrogen Rate (max)		17,424 scfm
Estimated Pump Time (HH:MM)		00:33
Nitrogen Pumped Volume		456,216 scf
Nitrogen Cooldown Volume		20,000 scf
Treatment Fluid	27,500 gals	24PPT Linear Foam
Flush	2,000 gals	Claytreat Water
Diagnostic	2,000 gals	Claytreat Water
Diagnostic	1 gals	SHUT DOWN
Proppants	51,000 lb	Sand, Brown, 20/40

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Operator Name: Well Name: Job Description: Date:

Palomar Natural Resources PRAIRIE FALCON 19 #1 Stage 1 -70Q -Linear N2 Foam -51k Sand Brown February 24, 2015



Proposal No: 118250127B

FLUID SPECIFICATIONS

Treatment Fluid: 24PPT Line	ar Foam						
Foam Volume:	27,500 Gallons						
Pumped Liquid	8,250 Gallons						
Pumped Gas Volume:	456 Mscf Nitrogen						
Components:							
6 gp		Foaming Agent					
6 gp		Gelling Agent					
1 gp		Clay Stabilization Product					
1 gp		Gel Breaker					
1 gp	t Flo-Back Prime, tote	Surface Tension Reducer					
1 gp	t NE-35, 330 gl tote	Non-Emulsifier					
1 pp	t GBW-5	Gel Breaker					
	(Last 5k gallons)						
0.05 gp	· •	Bacteria Control Product					
		· · · · · · · · · · · · · · · · · · ·					
Flush: Claytreat Water							
Foam Volume:	2,000 Gallons						
Pumped Liquid	1,889 Gallons						
	·,						
Components:	· .						
2 pp	t GBW-5	Gel Breaker					
1 gp	t Clay Master-5C	Clay Stabilization Product					
1 gp	t Flo-Back Prime, tote	Surface Tension Reducer					
0.05 gp		Bacteria Control Product					
Diagnostic: Claytreat Water							
•	2,000 Gallons						
Components:	· · · · · · · · · · · · · · · · · · ·						
1 gp		Clay Stabilization Product					
0.05 gp	t Magnacide 575	Bacteria Control Product					
Diagnostic: SHUT DOWN	Diagnostic: SHUT DOWN						
	1 Gallons						
Proppants	51,000 lb 100% Sand, Brown	20/40					
····phanto		, _0, ,0					

Base fluid will be 2% KCI water and customer supplied. Breaker and additive loading subject to change pending lab testing.

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Have more questions? You can find us at: http://www.bakerhughes.com/products-and-services/pressure-pumping Gr4127

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Operator: Well Name: Job Description: Date:

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Palomar Natural Resources PRAIRIE FALCON 19 #1 Stage 1 -70Q -Linear N2 Foam -51k Sand Brown February 24, 2015



Proposal No: 118250127B

FRACTURE TREATMENT SCHEDULE NITROGEN FOAM

INPUT PARAMETERS

TVD Depth (Mid Per	foration)			2,892 ft
MD Depth (Mid Perf	oration)			2,892 ft
Perforations Numbe	r			16
Perforation Diameter	r			0.380 in
Bottom Hole Frac Pr	essure			2,603 psi
Bottom Hole Static T	emperature			128 ° F
Fluid Specific Gravit	у			1.010
Fluid Temperature ir	n Tanks			60 ° F
Nitrogen Temperatu	re at Surface			100 ° F
				Top Bottom
Casing	4 1/2" O.D.	(4.000" I.D.)	11.6 # N -80	0 3,151

CALCULATED TEMPERATURES

	Maximum	<u>Minimum</u>	Average
System at Wellhead	64 ° F	60 ° F	
System at Perforation	77 ° F	61 ° F	
System at Formation (mean)			107 ° F

CALCULATED RATES, PRESSURES & HHP REQUIREMENTS

	<u>Maximum</u>	<u>Minimum</u>	<u>Average</u>
Surface Treating Pressure (psi)	2,715	1,698	2,479
Slurry Rate (bpm)	25.0	1.0	10.3
Nitrogen Rate (scfm)	17,425	14,748	16,072
Proppant Rate (lbs/min)	3,557	260	2,117
Slurry Hydraulic Horsepower	1,367	42	629

Volumes, Rates and Qualities are based on Downhole Temperature and Pressures.

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2.2 Procedure

2.2.1 Job Fluids

2% KCL Water/ 21000.0 (Gal)

Base Fluid	2% KCL WATER	21000 (Gal)	Additive Material	BE-6	2.00 (lbm)
	1000.00 (gal/Mgal)			0.15 (lbm/Mgal)	
Additive	Losurf-300D	18.00 (Gal)			
Material	1.00 (gal/Mgal)				

Notes:null

Water Frac G 20#/ 52500.0 (Gal)

Base Fluid	2% KCL WATER	52500 (Gal)	Additive Material	BE-6	8.00 (lbm)
	1000.00 (gal/Mgal)			0.15 (lbm/Mgal)	
Breaker	GBW-30	53.00 (lbm)	Surfactant	Losurf-300D	53.00 (Gal)
	1.00 (lbm/Mgal)			1.00 (gal/Mgal)	

Notes:null

Delta-R Foam Frac 20#/ 46578.0 (Gal)

Base Fluid	2% KCL WATER	46578 (Gal)	Breaker	GBW-30	47.00 (lbm)
	1000.00 (gal/Mgal)			1.00 (lbm/Mgal)	
Surfactant	Losurf-300D	24.00 (Gal)	Additive Material	Optiflo HTE	94.00 (lbm)
	0.50 (gal/Mgal)			2.00 (lbm/Mgal)	
Additive	BE-6	7.00 (lbm)			
Material	0.15 (lbm/Mgal)				

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2.2.2 Job Totals

Fluids

Additive	BE-6	17.00(lbm)	Additive	Losurf-300D	95(Gal)
Material		•	Material		
Breaker	GBW-30	100.00(lbm)	Additive	Optiflo HTE	94.00(lbm)
			Material		

Proppants

	Designed Qty	Requested
Premium White-20/40	240000 (lbm)	240000(lbm)

Customer Supplied Items

3	Designed Qty	Tank Bottom	Requested with Tank Bottom
2% KCL WATER	120078 (Gal)	0 (Gal)	120078(Gal)

CO2 and N2 Totals

N2 Volume		1130556 (scf)
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