

State of New Mexico  
Energy, Minerals and Natural Resources Department

Susana Martinez  
Governor

David Martin  
Cabinet Secretary

Brett F. Woods, Ph.D.  
Deputy Cabinet Secretary

David R. Catanach  
Division Director  
Oil Conservation Division



**New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.**

Operator Signature Date: 10-4-14

Well information;

Operator Bridge Creek Well Name and Number Harris Hawk 20#1

API# 30-045-35631, Section 20, Township 31 N/S, Range 14 E/W

Conditions of Approval:

(See the below checked and handwritten conditions)

- ☒ Notify Aztec OCD 24hrs prior to casing & cement.
- ☐ Hold C-104 for directional survey & "As Drilled" Plat
- ☐ Hold C-104 for NSL, NSP, DHC
- ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- ☐ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- ☐ 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
- ☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ☒ 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.
- ☒ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

  
NMOCD Approved by Signature

1-21-2015  
Date, KC

RECEIVED

JAN 15 2015

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTRECEIVED  
ELECTRONIC REPORT

OCT 14 2014

FORM APPROVED  
OMB No. 1004-0136  
Expires July 31, 2010

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. 751141038
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name UTE MOUNTAIN UTE
2. Name of Operator BRIDGECREEK RESOURCES CO. LLC Contact: DAN GRALLA DAN@PALOMARNR.COM		7. If Unit or CA Agreement, Name and No.
3a. Address 8100 SOUTHPARK WAY, SUITE A1 LITTLETON, CO 80127		8. Lease Name and Well No. HARRIS HAWK 20-1
3b. Phone No. (include area code) Ph: 303-956-0884		9. API Well No. 30-45-35631
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface NWSE 1980FSL 1980FEL 36.884645 N Lat, 108.330312 W Lon At proposed prod. zone NWSE 1980FSL 1980FEL 36.884645 N Lat, 108.330312 W Lon		10. Field and Pool, or Exploratory VERDE GALLUP
14. Distance in miles and direction from nearest town or post office* 10.4 MILES NORTH OF KIRTLAND		11. Sec., T., R., M., or Blk. and Survey or Area J Sec 20 T31N R14W Mer NMP SME: BIA
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660 FEET	16. No. of Acres in Lease 8915.98	12. County or Parish SAN JUAN
17. Spacing Unit dedicated to this well 40.00	18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 1320 FEET	13. State NM
19. Proposed Depth 3600 MD 3600 TVD	20. BLM/BIA Bond No. on file B008918	
21. Elevations (Show whether DF, KB, RT, GL, etc.) 5671 GL	22. Approximate date work will start 11/30/2014	23. Estimated duration 35 DAYS

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) BARB WICKMAN Ph: 970-564-9100	Date 10/14/2014
Title PROJECT MANAGER		
APPROVED FOR A PERIOD NOT TO EXCEED 2 YEARS		
Approved by (Signature) /s/ Connie Clementson	Name (Printed/Typed)	Date JAN 9 2015
Title Field Manager	Office TRES RIOS FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

## Additional Operator Remarks (see next page)

Electronic Submission #270865 verified by the BLM Well Information System  
For BRIDGECREEK RESOURCES CO. LLC, sent to the Durango  
Committed to AFMSS for processing by BARBARA TELECKY on 10/16/2014 (15BDT0011AE)SEE ATTACHED  
CONDITIONS OF APPROVALVenting / Flaring approved for 30 days  
per NTL-4A

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED

Approval of this agreement does not warrant or certify that the operator thereof and other holders of operating rights hold legal or equitable title to those rights in the subject lease which are committed hereto...

DISTRICT I  
1825 N. French Dr., Hobbs, N.M. 88240  
Phone: (575) 393-8181 Fax: (575) 393-0720

DISTRICT II  
811 S. First St., Artesia, N.M. 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410  
Phone: (505) 334-8178 Fax: (505) 334-8170

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, N.M. 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-35631	*Pool Code 62510	*Pool Name Verde Gallup
*Property Code 314110	*Property Name HARRIS HAWK 20	*Well Number 1
*GRID No. 310262	*Operator Name BRIDGECREEK RESOURCES (COLORADO), LLC	*Elevation 5671

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	20	31 N	14 W		1980	SOUTH	1980	EAST	SAN JUAN

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

*Dedicated Acres	*Joint or Infill	*Consolidation Code	*Order No.
40			

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

18 N 89°41'44" W 2639.99'	N 89°41'53" W 2640.89'
LEGEND: ○ = SURFACE LOCATION ● = FOUND 1985 B.L.M. BRASS CAP	
SECTION 20	
SURFACE LAT: 36.8846454° N LONG: 108.3303125° W NAD 83 LAT: 36°53.07872' N LONG: 108°19.78060' W NAD 27	1980'
1980'	
N 89°41'19" W 2640.00'	N 89°42'30" W 2639.84'

<sup>17</sup> OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: Daniel Gralla Date: 10-6-14  
Printed Name: Daniel Gralla  
E-mail Address: dgralla@palomacnr.com

<sup>18</sup> SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey: 08/06/14  
Signature and Seal: Marshall W. Linden  
Professional Surveyor  
Certificate Number: 17078

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED  
ELECTRONIC REPORT

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*

BUREAU OF LAND MANAGEMENT

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

5. Lease Serial No. 751141038
6. If Indian, Allottee or Tribe Name UTE MOUNTAIN UTE
7. If Unit or CA/Agreement, Name and/or No.
8. Well Name and No. HARRIS HAWK 20-1
9. API Well No. 30-045-35631
10. Field and Pool, or Exploratory VERDE GALLUP
11. County or Parish, and State SAN JUAN COUNTY, NM

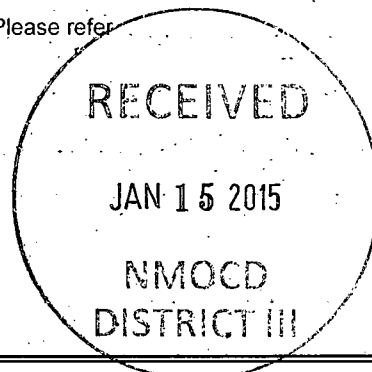
1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	
2. Name of Operator BRIDGECREEK RESOURCES COLO LLC Contact: DAN GRALLA Email: DAN@PALOMARNR.COM	
3a. Address 8100 SOUTHPARK WAY, SUITE A1 LITTLETON, CO 80127	3b. Phone No. (include area code) Ph: 303-956-0884
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 20 T31N R14W NWSE 1980FSL 1980FEL 36.884645 N Lat, 108.330312 W Lon	

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Change to Original APD
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

There have been several changes made to the original Harris Hawk 20-1 Drilling Plan. Please refer to the attached, updated Drilling Plan.



14. I hereby certify that the foregoing is true and correct. <b>Electronic Submission #272819 verified by the BLM Well Information System For BRIDGECREEK RESOURCES COLO LLC, sent to the Durango Committed to AFMSS for processing by BARBARA TELECKY on 10/23/2014 (15BDT0025SE)</b>	
Name (Printed/Typed) <b>BARB WICKMAN</b>	Title <b>PROJECT MANAGER</b>
Signature (Electronic Submission)	Date <b>10/22/2014</b>

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By <u>DAN RABINOWITZ</u>	Title <u>ACTING MINERALS STAFF CHIEF</u>	Date <u>01/09/2015</u>
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office <u>Durango</u>

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

**NMOCD**

OCT 22 2014

Attachment to Application for Permit to Drill.  
Drilling program

BUREAU OF LAND MANAGEMENT

# Bridgecreek Resources (Colorado), LLC

## Harris Hawk No. 20-1

Surface Location: 1980' FSL & 1980' FEL  
Section 20, T31N, R14W  
Ungraded GL Elev = 5671'

Drilling program written in compliance with onshore Oil and Gas Order No. 1  
(001 III.D.3, effective May 2007) and Onshore Order No. 2 Dated November 18, 1988

### 1. Geological Name of Surface Formation / Estimate Formation Top

The following table identifies the expected geologic markers and estimated formation tops (in feet from surface) based on seismic data. The well will be drilled to approximately 50 feet above the Dakota formation.

FORMATION	ESTIMATED FORMATION TOP FEET TVD	ESTIMATED FORMATION THICKNESS, FT	EXPECTED PRODUCTION
Lewis	Surface	480	Water
Cliff House	480	160	Water
Menefee	640	735	Water
Point Lookout	1375	405	Water
Upper Mancos	1780	955	Water
Gallup	2735	220	Oil and Water
Tocito	2955	129	Oil and Gas
Greenhorn	3084	381	Oil and Gas
Graneros	3465	135	Water
Total Well Depth	3600		

### 2. Estimated Depth of all Zones Anticipated to Have Fluid Occurrences (Oil, Gas, Water)

The expected moveable fluids in each zone are shown in the table above. Historically the Tocito interval did not produce any water, and we do not expect water production from the Gallup at this time.

### 3. Pressure Control Equipment

- Pressure control will be performed using a Blowout Preventer (BOP) similar to the one shown on

OCT 22 2014

Exhibit #1. The table below shows the intervals where the BOP will be used.

BUREAU OF LAND MANAGEMENT

DEPTH INTERVAL	BOP EQUIPMENT
0-270'	No pressure control required
270' – 1800'	11" 2000 psi double ram BOP
1800' – 3600'	11" 2000 psi double ram BOP

b. BOP Testing Procedure

- i. Initial 11" 2M BOP stack will be installed in casing head after setting 9-5/8" surface casing.
- ii. The BLM (Durango Office) and State of NM will be notified 24 hours in advance of all BOP pressure tests. BLM to provide contact name and phone number.
- iii. Pressure tests will be conducted on the BOP stack using a test plug and independent test company after nipple up.
- iv. Subsequent BOP tests will be conducted a minimum of every 30 days. A new test will be conducted each time the stack is altered.
- v. All BOP and manifold tests will be in accordance with the requirements of Onshore Order No. 2.

c. BOP Test Pressures

9.625" BOP			
Pressure Test	Ram Test	Hydrill Test	Manifold Test
High Pressure	2000 psi	NA	2500 psi
Low Pressure	200 psi	NA	250 psi

d. Ancillary Equipment

- i. Upper Kelly cock and lower Kelley cock will be installed while drilling.
- ii. Inside BOP or stab in valve will be available in open position on rig floor at all times.
- iii. Safety valves and subs to fit all string connections in use.
- iv. Choke Manifold will be installed and tested when drilling out of surface casing.
- v. Drilling spool to accommodate choke and kill lines with choke manifold rated at 2000 psi.

OCT 22 2014

4. Proposed Bit and Casing Program

BUREAU OF LAND MANAGEMENT

a. Casing Program – all casing strings are new casing

Hole Size	Casing Size	Weight	Grade	Coupling	Casing Setting Depth (MD)	Comments
12 1/4"	9 5/8 "	36 ppf	J-55	ST&C	0' - 270'	New casing. Cement to surface.
8-3/4"	7 "	20 ppf	J-55	LT&C	0' - > 1800' MD	New Casing. Cement to surface.
6-1/4"	4 1/2 "	11.6 ppf	N-80	LT&C	Surface to 3600	New Casing Foamed Cement 200 feet into previous casing.

Casing strings below the conductor casing will be tested to .22 psi per foot of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield.

Minimum casing design factors used:

Collapse -	1.125
Burst -	1.0
Jt. Strength -	1.80

Surface casing shall have a minimum of 1 centralizer per joint on the bottom three (3) joints, starting with the shoe joint for a total of (4) minimum centralizers. Centralizers will be placed 10' above the shoe on the shoe joint, on the 1st, 2nd and 3rd casing collars then every other joint to surface.

The production casing will be centralized using 1 centralizer on the first 10 jts and then every 4th joint to the surface.

It is proposed to set the 7" casing string at the top of the oil bearing rock. This depth which will be picked during drilling by the mud logger and may be deeper than 1800 feet. This is to maximize dipole sonic data acquisition which must be acquired in liquid, not air.

5. Proposed Cementing Program

The proposed cementing program has been designed to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. All indications of useable water shall be reported.

a. The proposed cementing program is as follows:

Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a pre-flush fluid, inner string cement method, etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.

RECEIVED  
ELECTRONIC REPORT

OCT 22 2014

BUREAU OF LAND MANAGEMENT

Surface Casing Single Stage Job (0-225'):

Excess – 125% over gauge hole – 12-1/4" hole and 9-5/8" casing  
Top of Cement – Surface

Main Slurry: 130 sx Premium, - 15.8 ppg, yield 1.16 cf/sx

Intermediate Casing – Single Stage Job (0-1800' MD):

Excess – 50% over gauge hole – 8-3/4" hole and 7" casing  
Top of Cement – Surface.

Lead – 215 sx Premium – 12.7 ppg, yield 1.81 cf/sx

Tail -100 sx Premium – 15.8 ppg, yield 1.15 cf/sx

Production Casing – Single Stage Foam Job (3600' - 1600' MD):

Excess – 50% over gauge hole – 6-1/4" hole and 4-1/2" casing  
Top of Cement – Top of Liner or equivalent into 7" casing

Lead Cement - Cap Cement

ELASTISEAL (TM) SYSTEM	Fluid Weight	13 lbm/gal
0.2 % Versaset (Thixotropic Additive)	Slurry Yield:	1.43 ft <sup>3</sup> /sk
0.15 % HALAD-766 (Low Fluid Loss Control)	Total Mixing Fluid:	6.75 Gal/sk
0.2 % Halad(R)-344 (Low Fluid Loss Control)	Volume:	7.15 bbl
	Calculated Sacks:	30 sx

Tail Cement

ELASTISEAL (TM) SYSTEM	Fluid Weight	13.50 lbm/gal
0.2 % Versaset (Thixotropic Additive)	Slurry Yield:	1.28 ft <sup>3</sup> /sk
0.15 % HALAD-766 (Low Fluid Loss Control)	Total Mixing Fluid:	5.64 Gal/sk
0.05 % SA-1015 (Suspension Agent)	Volume:	128 cf
	Calculated Sacks:	70 sx

Foamed Lead Cement

ELASTISEAL (TM) SYSTEM	Fluid Weight:	13 lbm/gal At Surface
	Foamed Fluid Weight:	10 lbm/gal
0.2 % Versaset (Thixotropic Additive)	Unfoamed Slurry Yield:	1.43 ft <sup>3</sup> /sk
	Foamed Slurry Yield:	1.80 ft <sup>3</sup> /sk
0.15 % HALAD-766 (Low Fluid Loss Control)	Total Mixing Fluid:	6.75 Gal/sk
2.5 % CHEM - FOAMER 760, TOTETANK (Foamer)	Volume:	43 cfl
0.2 % Halad(R)-344 (Low Fluid Loss Control)	Calculated Sacks:	40 sx

Total sacks of cement pumped = ~585 sx

**Cement volumes are minimums and may be adjusted based on caliper log results.**

Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and State of New Mexico Oil & Gas Division requirements. Slurries used



**OCT 22 2014**

BUREAU OF LAND MANAGEMENT

will be the slurries listed above or equivalent slurries depending on service provider selected.  
Cement yields may change depending on slurries selected.

All waiting on cement times shall be a minimum of 8 hours or adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

## 6. Proposed Drilling Fluid Program

### a. Mud type and properties

Hole Size (in)	Drilled Hole TVD (ft)	Mud Type	Density (lb/gal)	Viscosity (sec/qt)	Fluid Loss (cc)
12 1/4"	0-225'	Fresh Mud	8.4 - 8.6	70-100	NC
8-3/4"	225' - 1800'	Fresh Mud	8.5 - 8.8	40-50	6 - 8
6-1/4"	1800' - 3600'	Air/Mist	NA	NA	NA

- i. The reserve pit will be ~ 30' x 70' x 14' with a flare pit in the far corner. The pit will be lined with a 20 mil thick plastic impervious membrane material. In regards to the pit and disposal of cuttings within the pit, all applicable rules from the NMOCD 19.15:17 will apply. Enough barite will be kept onsite to weight mud sufficiently to contain any unexpected pressures.
- ii. Air drilling will use an anchored 6-inch blooie line with an igniter and dust suppression at the end of the blooie line where it enters the flare pit. The end of the blooie line will be at least 100 feet from the wellhead. Air compression equipment will be on the opposite side of the wellbore from the flare pit and be a safe distance from the wellhead. The compression equipment will be equipped with an emergency kill switch, a pressure relief valve, and spark arresters on the motors, and be capable of 2400 +/- CFM at 800 psi.

### b. Monitoring

- i. Mud volume and flow will be monitored visually.

## 7. Formation Evaluation Program

<b>Cores</b>	Possible Sidewall (percussion or rotary)
<b>Testing</b>	None anticipated
<b>Sampling</b>	30' samples from 250' to TD
<b>Surveys</b>	Single shot surveys as needed, or at a minimum every 500' to TD.
<b>Log program</b>	DIL-GR-SP, FDC-CNL-GR-Caliper in zones of interest

## 8. Drilling Conditions

### a. Anticipated abnormal pressures or temperatures.

i. No abnormal pressures or temperatures or other hazards are anticipated.

ii. Maximum bottom hole pressure equals approximately 1685 psig (pounds per square inch gauge)\*

\*  $\text{Max mud wt} \times 0.052 \times \text{TD} = \text{A (bottom hole pressure)}$   
 $9 \times 0.052 \times 3600 = 1685 \text{ psig}$

\*\*  $\text{Maximum surface pressure} = \text{A} - (0.22 \times \text{TD})$   
 $1685 - (0.22 \times 3600) = 893 \text{ psig}$

### b. Hydrogen Sulfide (H2S)

H2S is not expected but standard monitoring and personal monitors will be in place on the rig and drilling crew.

## 9. Other Information

This is a vertical well and no directional drilling equipment should be used. The anticipated completion zone will be the Tocito reservoir. The well will be cased, perforated to allow the fluids to flow thru the casing, stimulated with N2 and sand proppant in up to four stages.

### a. Drilling and Completion Schedule

Activity	Date
Location Construction	November 2014
Spud	December 2014
Total Drilling Duration	12 days drilling time
Clean up and site prep	15 days
Total Completion Duration	10 days completion time

RECEIVED  
ELECTRONIC REPORT

OCT 22 2014

BUREAU OF LAND MANAGEMENT

**Bridgecreek Resources**

**3160**

**Tribal IMDA: 751-14-1038**

**Well: Harris Hawk # 20-1**

**Surface Location: 1980' FSL & 1980' FEL**

**Sec. 20, T. 31 N., R. 16 W.**

**San Juan County, New Mexico**

**Conditions of Approval - Drilling Plan:**

1. Notify this office at least **3 days** prior to:

- a. spudding the well
- b. running casing strings and cementing
- c. BOP tests
- d. Drill Stem Testing

**For the above procedures, Operators must talk to BLM personnel directly. Do not leave messages on answering machines. Contact Dan Rabinowitz, BLM Petroleum Engineer: office: 970-385-1363, or Rod Brashear: office: 970-385-1347, and cell: 970-799-1244.**

2. All BOP tests will be performed with a test plug in place. BOP will be tested to full stack working pressure and annular preventer to 50% maximum stack working pressure. All accumulators will be function tested as per Onshore Order #2. All 2M or greater systems require **adjustable** chokes as per Onshore Order #2.

3. No additional zones will be commingled without UMU Tribal and BLM approval.

4. If a BLM Inspector is not present during the initial BOP test, please provide chart record.

5. Submit copies of all logs to this office both paper and in Log ASCII Standard (LAS) format.

Continued on Page 2.

**6. If any operations are to start over the weekend, notify this office by noon Friday. If any problems arise after hours or on weekends, call BLM personnel using the home phone numbers listed on the following 'INFORMATIONAL NOTICE - APD's'. Do not leave messages on answering machines.**

7. The BLM must witness the topping-off of the Surface Casing Cement.

8. A CBL is required if cement is not circulated to the surface on either the Surface or Intermediate casing strings. BLM verbal approval will be required prior to squeezing.

9. A CBL will be required to determine the TOC and overlap of the Foamed Cementing of the Production Casing.

10. The tops of all major identifiable geologic units (formations) from surface to TD will be logged and recorded.

11. Stabilized bottomhole pressure measurements and flowrates must be collected and submitted to the BLM.

12. Please provide the following information if possible. All tests and operations on any well on subject lands shall be conducted at Operator's sole discretion.

All Wire Line Logs - Fields & Final Print (Electrical, Radioactive, Sonic, Velocity, Cement Bond, Temperature, etc with digitized and log analysis).

Drill Stem Tests - Field and Final Reports.

Core Analysis - Field and Final Reports.

Mud Log - Final Report.

Structure and Isopach Maps.

Location (Surveyors) Plat.

Application to Drill (Drilling Permit).

Daily Drilling Reports, Daily Work Over Reports and Final Drilling Report Summary.

Directional Survey.

Continued on page 3.

Geological Summary Report.

Completion Report.

Production Tests (All Production Tests during Completion, AOF, Potential, GOR, etc).

30 Day Well Production Test Record

Bottom Hole Pressure Surveys including build up tests.

Shut in Surface Pressure Surveys.

Gas, Oil and Water Analyses.

State and/or BLM Completion Reports.

State and/or BLM and/or MMS Monthly Production and OGOR Reports.

Additional Governmental Permits and Reports.

Drilling Contracts.

Operating Agreements.

Oil and Gas Sales Contracts.

Plug and Abandon Reports.

Monthly, Gas and/or Plant Products Purchasing Statements.

Well Bore Profiles.

Division Orders/Title Opinions.

AFEs.

Final Drill and Completion Costs.

Other wellfile information as requested by the Tribal Department of Energy.