Form 3160-3
(June 2015)

RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JAN 06 2020

DISTRICT II-ARTESIA O.C.D.

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM019601

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
GLADIATOR FED COM 3502 B
1H
326903

2. Name of Operator
RIDGE RUNNER RESOURCES OPERATING LLC

9. API Well No.
30-015-46592

3a. Address
1004 N. Big Spring Street, Suite 325 Midland TX 79701

3b. Phone No. *(include area code)*
(432)684-7877

10. Field and Pool, or Exploratory
CULEBRA BLUFF / BONE SPRING SOU

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface NWNW / 100 FNL / 360 FWL / LAT 32.3561975 / LONG -104.0658126
At proposed prod. zone SWSW / 100 FSL / 330 FWL / LAT 32.3275995 / LONG -104.0657412

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 35 / T22S / R28E / NMP

14. Distance in miles and direction from nearest town or post office*
5 miles

12. County or Parish
EDDY

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
100 feet

16. No of acres in lease
320

17. Spacing Unit dedicated to this well
319.61

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
30 feet

19. Proposed Depth
9450 feet / 19610 feet

20. BLM/BIA Bond No. in file
FED: NMB001616

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3081 feet

22. Approximate date work will start*
04/01/2019

23. Estimated duration
120 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Brian Wood / Ph: (505)466-8120	01/29/2019
Title: President		
Approved by *(Signature)* (Electronic Submission)	Name *(Printed/Typed)* Cody Layton / Ph: (575)234-5959	Date 10/25/2019
Title: Assistant Field Manager Lands & Minerals	Office: CARLSBAD	

Application approval 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.
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.

APPROVED WITH CONDITIONS

Approval Date: 10/25/2019

(Continued on page 2)

*(Instructions on page 2)

RWP 1-15-2020

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Is the proposed well in an area containing other mineral resources? USEABLE WATER

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** GLADIATOR FED COM 3502 W **Number:** 1H

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 5 Miles **Distance to nearest well:** 30 FT **Distance to lease line:** 100 FT

Reservoir well spacing assigned acres Measurement: 319.61 Acres

Well plat: Gladiator_3502B_1H_Plat_GasCap_Plan_20190129155350.pdf

Well work start Date: 04/01/2019 **Duration:** 120 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 10034 **Reference Datum:**

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce
SHL Leg #1	100	FNL	360	FWL	22S	28E	35	NWN	32.3561975	-104.0658126	EDDY	NEW MEXI	NEW MEXI	F	NMNM 019601	3081	0	0	
KOP Leg #1	100	FNL	360	FWL	22S	28E	35	NWN	32.3561975	-104.0658126	EDDY	NEW MEXI	NEW MEXI	F	NMNM 019601	-5796	8877	8877	
PPP Leg #1	1320	FNL	330	FWL	23S	28E	2	SWN	32.33835	-104.065788	EDDY	NEW MEXI	NEW MEXI	S	STATE	-6369	15700	9450	

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce
PPP Leg #1	0	FNL	330	FWL	23S	28E	2	4	32.341962	-104.0658	DE BAC	NEW MEXI	NEW MEXI	S	STATE	-6369	14380	9450	
PPP Leg #1	225	FNL	358	FWL	22S	28E	35	NWN	32.3558552	-104.0658191	EDDY	NEW MEXI	NEW MEXI	F	NMNM 019601	-6149	9259	9230	
EXIT Leg #1	100	FSL	330	FWL	23S	28E	2	SWS	32.3275995	-104.0657412	EDDY	NEW MEXI	NEW MEXI	F	FEE	-6369	19610	9450	
BHL Leg #1	100	FSL	330	FWL	23S	28E	2	SWS	32.3275995	-104.0657412	EDDY	NEW MEXI	NEW MEXI	F	FEE	-6369	19610	9450	

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

Additional Operator Remarks

Location of Well

1. SHL: NWNW / 100 FNL / 360 FWL / TWSP: 22S / RANGE: 28E / SECTION: 35 / LAT: 32.3561975 / LONG: -104.0658126 (TVD: 0 feet, MD: 0 feet)
PPP: NWNW / 225 FNL / 358 FWL / TWSP: 22S / RANGE: 28E / SECTION: 35 / LAT: 32.3558552 / LONG: -104.0658191 (TVD: 9230 feet, MD: 9259 feet)
PPP: LOT 4 / 0 FNL / 330 FWL / TWSP: 23S / RANGE: 28E / SECTION: 2 / LAT: 32.341962 / LONG: -104.0658 (TVD: 9450 feet, MD: 14380 feet)
PPP: SWNW / 1320 FNL / 330 FWL / TWSP: 23S / RANGE: 28E / SECTION: 2 / LAT: 32.33835 / LONG: -104.065788 (TVD: 9450 feet, MD: 15700 feet)
BHL: SWSW / 100 FSL / 330 FWL / TWSP: 23S / RANGE: 28E / SECTION: 2 / LAT: 32.3275995 / LONG: -104.0657412 (TVD: 9450 feet, MD: 19610 feet)

BLM Point of Contact

Name: Priscilla Perez
Title: Legal Instruments Examiner
Phone: 5752345934
Email: pperez@blm.gov

Approval Date: 10/25/2019

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**RIDGE RUNNER RESOURCES**
LEASE NO.:	**NMNM19601**
WELL NAME & NO.:	**GLADIATOR FED COM 3502 B 1H**
SURFACE HOLE FOOTAGE:	**100'/N & 360'/W**
BOTTOM HOLE FOOTAGE	**100'/S & 330'/W**
LOCATION:	**Section 35, T.22 S., R.28 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	○ Low	◉ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **275** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8**

hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater..
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

3. The minimum required fill of cement behind the **7 X 5 ½** inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi. Minimum working pressure of the blowout

preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M)** psi.

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

JJP10152019

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including

lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

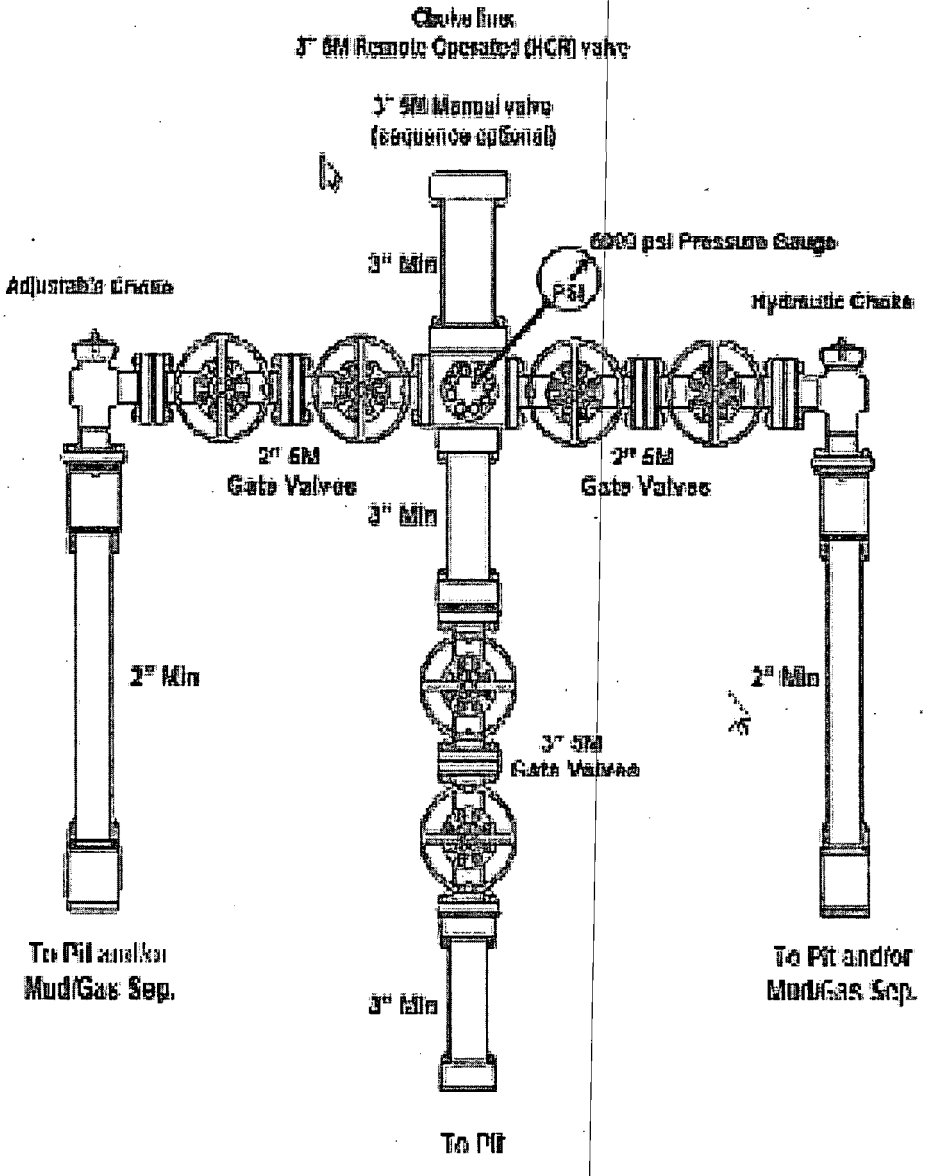
C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.


Choke line
3" SM Remote Operated (HCR) valve
3" SM Manual valve
(sequence optional)
3" Min
6000 psi Pressure Gauge
PSI
Adjustable Choke
Hydraulic Choke
2" SM
Gate Valves
2" SM
Gate Valves
3" Min
2" Min
2" Min
3" SM
Gate Valves
To Pit and/or
Mud/Gas Sep.
3" Min
To Pit and/or
Mud/Gas Sep.
To Pit

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

Gladiator Fed Com 3502 B 1H
Surface Hole Location: 100 ft. FNL and 360 ft. FWL; Section 35, T. 22 S., R. 28 E.
Bottom Hole Location (at proposed production zone): 100 ft. FSL and 330 ft. FWL; Section 2, T. 23 S., R. 28 E.

Gladiator Fed Com 3502 B 2H
Surface Hole Location: 100 ft. FNL and 390 ft. FWL; Section 35, T. 22 S., R. 28 E.
Bottom Hole Location (at proposed production zone): 100 ft. FSL and 1680 ft. FWL;
Section 2, T. 23 S., R. 28 E.

Gladiator Fed Com 3502 W 1H
Surface Hole Location: 100 ft. FNL and 330 ft. FWL; Section 35, T. 22 S., R. 28 E.
Bottom Hole Location (at proposed production zone): 100 ft. FSL and 330 ft. FWL; Section 2, T. 23 S., R. 28 E.

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Cave and Karst Conditions of Approval for APDs

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production:

Construction:

General Construction:

- No blasting
- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction, and no additional construction shall occur until clearance has been issued by the Authorized Officer.
- All linear surface disturbance activities will avoid sinkholes and other karst features to lessen the possibility of encountering near surface voids during construction, minimize changes to runoff, and prevent untimely leaks and spills from entering the karst drainage system.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

Pad Construction:

- The pad will be constructed and leveled by adding the necessary fill and caliche – no blasting.
- The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.
- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g., caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised (i.e. an access road crossing the berm cannot be lower than the berm height).
- Following a rain event, all fluids will vacuumed off of the pad and hauled off-site and disposed at a proper disposal facility.

Tank Battery Construction:

- The pad will be constructed and leveled by adding the necessary fill and caliche – no blasting.
- All tank battery locations and facilities will be lined and bermed.
- The liner should be at least 20 mil in thickness and installed with a 4 oz. felt backing, or equivalent, to prevent tears or punctures.
- Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Road Construction:

- Turnout ditches and drainage leadoffs will not be constructed in such a manner as to alter the natural flow of water into or out of cave or karst features.
- Special restoration stipulations or realignment may be required if subsurface features are discovered during construction.

Buried Pipeline/Cable Construction:

- Rerouting of the buried line(s) may be required if a subsurface void is encountered during construction to minimize the potential subsidence/collapse of the feature(s) as well as the possibility of leaks/spills entering the karst drainage system.

Powerline Construction:

- Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems.
- Larger powerlines will adjust their pole spacing to avoid cave and karst features.
- Special restoration stipulations or realignment may be required if subsurface voids are encountered.

Surface Flowlines Installation:

- Flowlines will be routed around sinkholes and other karst features to minimize the possibility of leaks/spills from entering the karst drainage system.

Leak Detection System:

- A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present.
- A leak detection plan will be submitted to BLM that incorporates an automatic shut off system (see below) to minimize the effects of an undesirable event that could negatively sensitive cave/karst resources.
- Well heads, pipelines (surface and buried), storage tanks, and all supporting equipment should be monitored regularly after installation to promptly identify and fix leaks.

Automatic Shut-off Systems:

- Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and groundwater concerns:

Closed Loop System:

- A closed loop system using steel tanks will be utilized during drilling – no pits
- All fluids and cuttings will be hauled off-site and disposed of properly at an authorized site

Rotary Drilling with Fresh Water:

- Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:

- The kick off point for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:

- ALL lost circulation zones between surface and the base of the cave occurrence zone will be logged and reported in the drilling report.
- If a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, regardless of the type of drilling machinery used, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:

- Additional plugging conditions of approval may be required upon well abandonment in high and medium karst potential occurrence zones.
- The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:

- The operator will perform annual pressure monitoring on all casing annuli and reported in a sundry notice.
- If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

- The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the

bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

- Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

- When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

- Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

- Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

- Temporary Fresh Water Frac Line(s): once the temporary use exceeds the timeline of 180 days and/or with a 90 day extension status; further analysis will be required if the applicant pursues to turn the temporary ROW into a permanent ROW.

Special Status Plant Species (SSPS) Habitat Stipualtions

- Vehicles and equipment will be kept on existing roads and approved surfaces only, and will avoid travel across undisturbed surfaces; workers will be instructed not to park off the roads or ROW in undisturbed areas.

- Alterations to project design and additions of project components will require SSPS surveys and re-analysis of impacts if those design project elements intersect SSPS suitable habitat.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

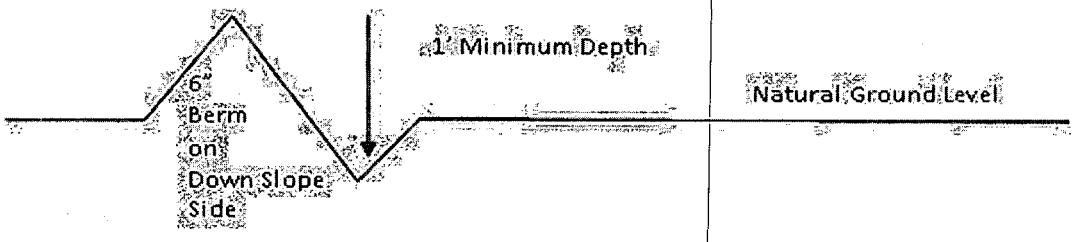
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

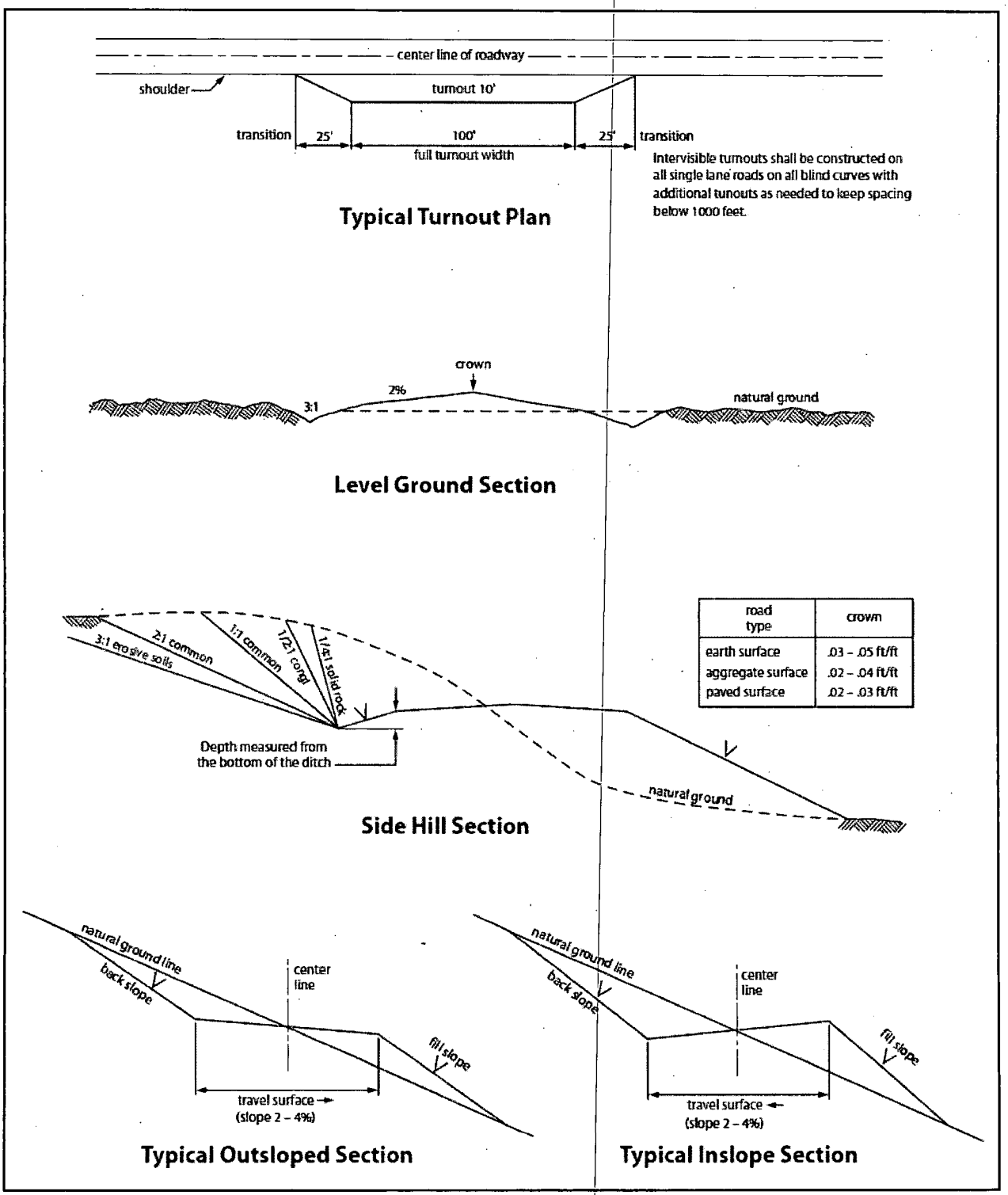


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production

equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Operator Certification Data Report

11/04/2019

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are

NAME: Brian Wood **Signed on:** 01/29/2019

Title: President

Street Address: 37 Verano Loope

City: Santa Fe **State:** NM **Zip:** 87508

Phone: (505)466-8120

Email address: afmss@permitswest.com

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Application Data Report

11/04/2019

APD ID: 10400038584 **Submission Date:** 01/29/2019

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400038584 **Tie to previous NOS?** N **Submission Date:** 01/29/2019

BLM Office: CARLSBAD **User:** Brian Wood **Title:** President

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM019601 **Lease Acres:** 320

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? YES **APD Operator:** RIDGE RUNNER RESOURCES OPERATING LLC

Operator letter of designation:

Operator Info

Operator Organization Name: RIDGE RUNNER RESOURCES OPERATING LLC

Operator Address: 1004 N. Big Spring Street, Suite 325 **Zip:** 79701

Operator PO Box:

Operator City: Midland **State:** TX

Operator Phone: (432)684-7877

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO **Master Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** CULEBRA BLUFF **Pool Name:** BONE SPRING SOUTH

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Is the proposed well in an area containing other mineral resources? USEABLE WATER

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** GLADIATOR FED COM 3502 W **Number:** 1H

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 5 Miles **Distance to nearest well:** 30 FT **Distance to lease line:** 100 FT

Reservoir well spacing assigned acres Measurement: 319.61 Acres

Well plat: Gladiator_3502B_1H_Plat_GasCap_Plan_20190129155350.pdf

Well work start Date: 04/01/2019 **Duration:** 120 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 10034 **Reference Datum:**

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce
SHL Leg #1	100	FNL	360	FWL	22S	28E	35	NWN	32.3561975	-104.0658126	EDDY	NEW MEXI	NEW MEXI	F	NMNM 019601	3081	0	0	
KOP Leg #1	100	FNL	360	FWL	22S	28E	35	NWN	32.3561975	-104.0658126	EDDY	NEW MEXI	NEW MEXI	F	NMNM 019601	-5796	8877	8877	
PPP Leg #1	1320	FNL	330	FWL	23S	28E	2	SWN	32.33835	-104.065788	EDDY	NEW MEXI	NEW MEXI	S	STATE	-6369	15700	9450	

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce
PPP Leg #1	0	FNL	330	FWL	23S	28E	2	4	32.341962	-104.0658	DE BAC	NEW MEXI	NEW MEXI	S	STATE	-6369	14380	9450	
PPP Leg #1	225	FNL	358	FWL	22S	28E	35	NWN	32.3558552	-104.0658191	EDDY	NEW MEXI	NEW MEXI	F	NMNM 019601	-6149	9259	9230	
EXIT Leg #1	100	FSL	330	FWL	23S	28E	2	SWS	32.3275995	-104.0657412	EDDY	NEW MEXI	NEW MEXI	F	FEE	-6369	19610	9450	
BHL Leg #1	100	FSL	330	FWL	23S	28E	2	SWS	32.3275995	-104.0657412	EDDY	NEW MEXI	NEW MEXI	F	FEE	-6369	19610	9450	

APD ID: 10400038584 **Submission Date:** 01/29/2019

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	QUATERNARY	3081	0	0	OTHER : Caliche	USEABLE WATER	N
2	RUSTLER ANHYDRITE	2831	250	250		OTHER : Brackish water	N
3	RUSTLER	2831	250	250		OTHER : Brackish water	N
4	TOP SALT	2601	480	480		NONE	N
5	DELAWARE	381	2700	2700	LIMESTONE	NONE	N
6	BELL CANYON	356	2725	2725	SANDSTONE	NATURAL GAS,OIL	N
7	CHERRY CANYON	-749	3830	3830	SANDSTONE	NATURAL GAS,OIL	N
8	BRUSHY CANYON	-1769	4850	4850	SANDSTONE	NATURAL GAS,OIL	N
9	BONE SPRING	-3164	6245	6245	LIMESTONE	NATURAL GAS,OIL	N
10	BONE SPRING 1ST	-4174	7255	7255	SANDSTONE	NATURAL GAS,OIL	N
11	BONE SPRING 2ND	-5029	8110	8110	SANDSTONE	NATURAL GAS,OIL	N
12	BONE SPRING 3RD	-5644	8725	8725	OTHER : Carbonate	NATURAL GAS,OIL	N
13	BONE SPRING 3RD	-6149	9230	9259	SANDSTONE	NATURAL GAS,OIL	Y

Section 2 - Blowout Prevention

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Pressure Rating (PSI): 5M **Rating Depth:** 10000

Equipment: Rig contract has not been let due to uncertainty regarding APD approval date. A typical 5M BOP stack and choke are attached. Rig specific diagrams will be provided via Sundry Notice once the rig contract is signed. Auxiliary equipment: Top drive will have an IBOP in lieu of Kelly cocks. A floor safety valve (i. e., TIW valve) will be available when tripping. In the event a walking rig is used, a variance is requested to use a flexible choke line with flanged ends between the BOP and choke manifold. The line will be kept as straight as possible with minimal turns. Actual specifications and certification will be provided via Sundry Notice if this option is exercised.

Requesting Variance? YES

Variance request: A variance is requested to use a 13.625" 5000 psi multi-bowl wellhead. When the BOP is initially installed after running the 13.375" (surface) casing, it will be tested to the higher test pressures of either the 12.25" (intermediate) or 8.5" (production) intervals. The 9.625" (intermediate) casing will be run with a mandrel hanger and without breaking any connections on the BOP. Thus, not requiring an additional BOP test.

Testing Procedure: A 5000 psi BOP system will be installed and tested to 3000 psi parameters before drilling the intermediate hole. Annular will be tested to 50% of rated WP. Double ram preventer will be used since a non-tapered drill string will be used. Double (pipe and blind) ram BOP will be tested to 3000 psi. This is based on: Intermediate hole: 8775' TVD x 10 ppg mud x 0.052 = 4563 psi – 8775' x 0.22 psi/ft = 1930 psi 2633 psi The installed 5000 psi BOP system will be tested to 5000 psi parameters before drilling the production hole. Annular will be tested to 50% of rated WP. Double (pipe and blind) ram BOP will be tested to 5000 psi. Since a non-tapered drill string will be used, a double ram preventer is adequate. This is based on: Production hole: 9450' TVD x 12.8 ppg mud x 0.052 = 6290 psi – 9450' x 0.22 psi/ft = 2079 psi 4211 psi BOPE will be tested by an independent service company to 250 psi low and the high pressures stated above as required by Onshore Order 2. The system may be upgraded to a higher pressure, but will still be tested to the pressures stated above. Pipe rams will be functioned daily. Blind rams will be functioned on each trip when out of the hole. Annular will be functioned weekly. BOP will be tested on initial installation, whenever a seal is broken, following repairs, or every 30 days.

Choke Diagram Attachment:

Gladiator_3502B_1H_Choke_20190702081641.pdf

BOP Diagram Attachment:

Gladiator_3502B_1H_BOP_20190702081648.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	450	0	450	3081		450	J-55	54.5	ST&C	1.125	1	DRY	1.6	DRY	1.6
2	PRODUCTION	8.5	7.0	NEW	API	Y	0	8775	0	8775	3081		8775	P-105	26	OTHER - USS-CDC	1.125	1	DRY	1.6	DRY	1.6
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	8775	0	8775	3081		8775	HCL-80	47	BUTT	1.125	1	DRY	1.6	DRY	1.6

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
4	PRODUCTION	8.5	5.5	NEW	API	Y	8775	19610	8775	9450			10835	P-110	20	OTHER - USS-CDC	1.125	1	DRY	1.6	DRY	1.6

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Gladiator_3502B_1H_Casing_Design_Assumptions_20190129162103.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Gladiator_3502B_1H_Casing_Design_Assumptions_20190129162403.pdf

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Casing Attachments

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Gladiator_3502B_1H_7in_Casing_Spec_20190129162308.pdf

Casing Design Assumptions and Worksheet(s):

Gladiator_3502B_1H_Casing_Design_Assumptions_20190129162354.pdf

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Gladiator_3502B_1H_5.5in_Casing_Spec_20190129162449.pdf

Casing Design Assumptions and Worksheet(s):

Gladiator_3502B_1H_Casing_Design_Assumptions_20190129162523.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	450	465	1.34	14.8	623	100	Class C	2% CaCl
INTERMEDIATE	Lead	2700	2700	8775	1045	2.5	11.3	2612	50	TXI light	5% salt + 4% SMS + additives
INTERMEDIATE	Tail		2700	8775	200	1.19	15.6	238	50	Class H	Additives
INTERMEDIATE	Lead	2700	0	8775	660	2.19	12.7	1445	100	Class C	6% gel + 5% salt + additives

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

String Type	Lead/Tail	Stage Tool	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Tail		0	8775	100	1.32	14.8	132	100	Class C	Additives
PRODUCTION	Lead		0	8775	2320	1.27	14.2	2426	15	50/50/2 Poz/G/gel	Additives
PRODUCTION	Lead		8275	19610	2320	1.27	14.2	2426	15	50/50/2 Poz/G/gel	Additives

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: All necessary additives (e. g., barite, bentonite, LCM) to maintain mud quality, combat lost circulation, and add weight for unexpected kicks will be on site at all times. Mud program may change due to hole conditions

Describe the mud monitoring system utilized: An electronic pit volume totalizer will monitor volume, flow rate, pump pressure, and stroke rate.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	450	OTHER : Fresh water spud mud	8.4	9							
450	8775	OTHER : Brine water	10	10							
8775	19610	OIL-BASED MUD	12.8	12.8							

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

None

List of open and cased hole logs run in the well:

OTH

Other log type(s):

None

Coring operation description for the well:

No core, drill stem test, or log is planned.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6930 **Anticipated Surface Pressure:** 4851

Anticipated Bottom Hole Temperature(F): 158

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Gladiator_3502B_1H_H2S_Plan_20190129163732.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Gladiator_3502B_1H_Horizontal_Drill_Plan_20190129163747.pdf

Other proposed operations facets description:

Cementing specs: May adjust intermediate Stage 1 approximately 50' for hard spot in Delaware limestone below salt. DV tool will be set at 2700'.

Other proposed operations facets attachment:

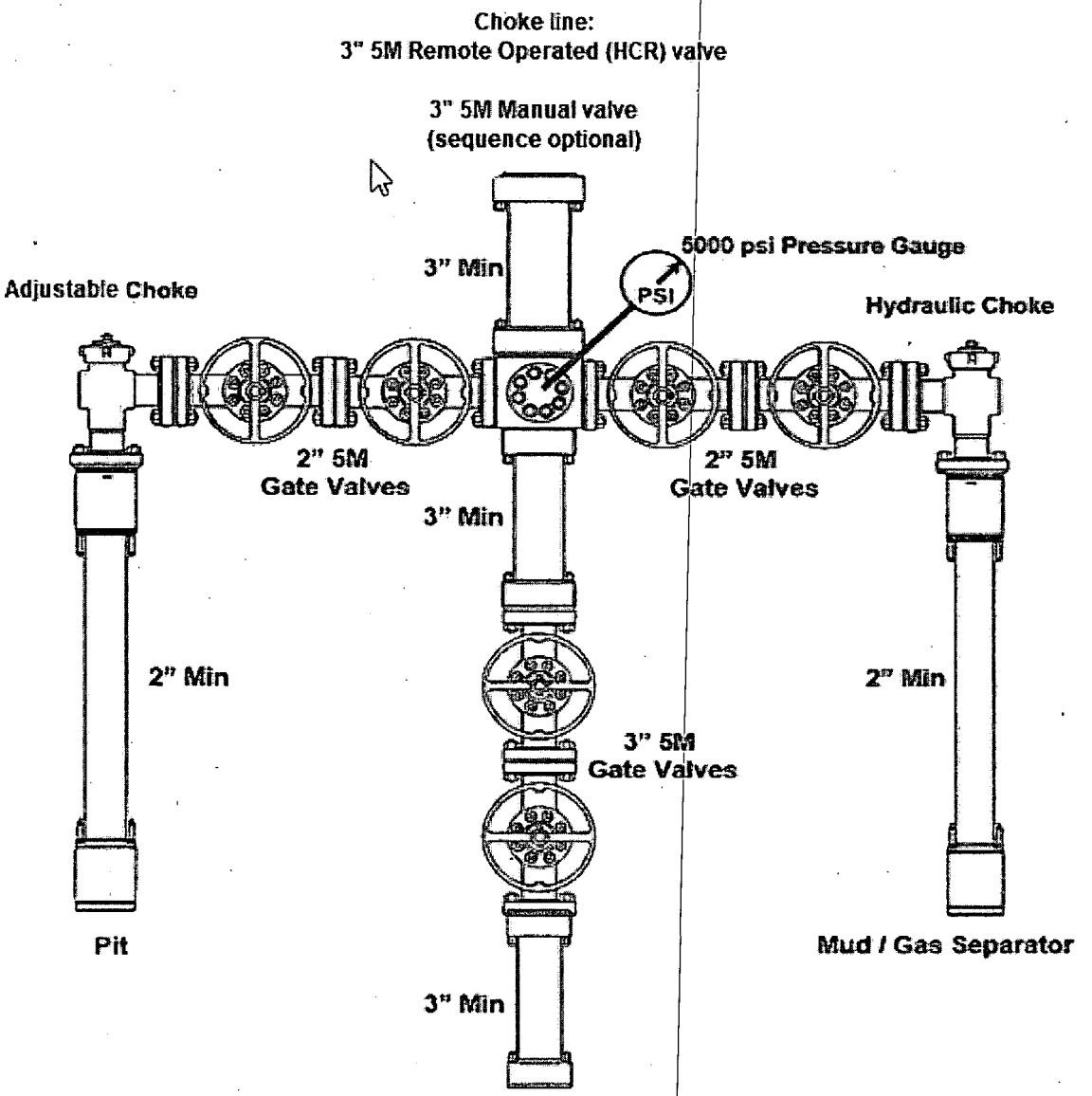
Gladiator_3502B_1H_Speedhead_Specs_20190129163808.pdf

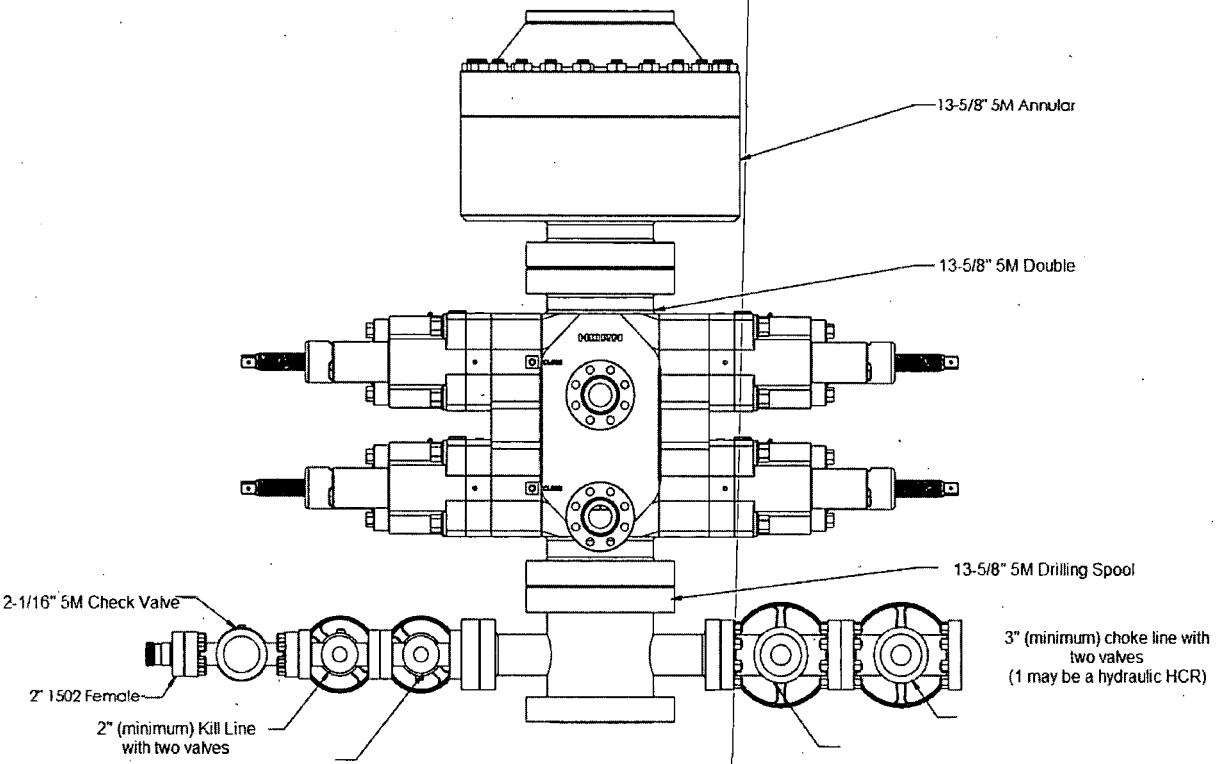
Gladiator_3502B_1H_Coflex_20190702081605.pdf

Gladiator_3502B_1H_Drill_Plan_20190702081620.pdf

Other Variance attachment:

Gladiator_3502B_1H_Cementing_Variance_Request_20190129163838.pdf


Choke line:
3" 5M Remote Operated (HCR) valve
3" 5M Manual valve
(sequence optional)
3" Min
5000 psi Pressure Gauge
PSI
Adjustable Choke
Hydraulic Choke
2" 5M
Gate Valves
2" 5M
Gate Valves
3" Min
2" Min
2" Min
3" 5M
Gate Valves
Pit
Mud / Gas Separator
3" Min


13-5/8" 5M Annular
13-5/8" 5M Double
13-5/8" 5M Drilling Spool
2-1/16" 5M Check Valve
2" 1502 Female
2" (minimum) Kill Line
with two valves
3" (minimum) choke line with
two valves
(1 may be a hydraulic HCR)

U. S. Steel Tubular Products

7.000" 26.00lbs/ft (0.362" Wall) P110 HC USS-CDC®

MECHANICAL PROPERTIES	Pipe	USS-CDC®	
Minimum Yield Strength	110,000	--	psi
Maximum Yield Strength	140,000	--	psi
Minimum Tensile Strength	125,000	--	psi

DIMENSIONS	Pipe	USS-CDC®	
Outside Diameter	7.000	7.656	in.
Wall Thickness	0.362	--	in.
Inside Diameter	6.276	6.276	in.
Standard Drift	6.151	6.151	in.
Alternate Drift	--	--	in.
Coupling Length	--	10.000	in.
Nominal Linear Weight, T&C	26.00	--	lbs/ft
Plain End Weight	25.69	--	lbs/ft

SECTION AREA	Pipe	USS-CDC®	
Critical Area	7.549	7.549	sq. in.
Joint Efficiency	--	100.0	%

PERFORMANCE	Pipe	USS-CDC®	
Minimum Collapse Pressure	7,540	7,540	psi
External Pressure Leak Resistance	--	6,030	psi
Minimum Internal Yield Pressure	9,960	9,960	psi
Minimum Pipe Body Yield Strength	830,000	--	lbs
Joint Strength	--	853,000	lbs
Compression Rating	--	512,000	lbs
Reference Length	--	21,872	ft
Maximum Uniaxial Bend Rating	--	44.4	deg/100 ft

MAKE-UP DATA	Pipe	USS-CDC®	
Make-Up Loss	--	5.00	in.
Minimum Make-Up Torque	--	14,000	ft-lbs
Maximum Make-Up Torque	--	17,500	ft-lbs
Connection Yield Torque	--	21,800	ft-lbs

1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).
2. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
3. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
4. Reference length is calculated by joint strength divided by nominal threaded and coupled weight with 1.5 safety factor.
5. Connection external pressure leak resistance has been verified to 80% API pipe body collapse pressure following the guidelines of API 5C5 Call II.

U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380

1-877-893-9461
connections@uss.com
www.usstubular.com

U. S. Steel Tubular Products

12/21/2018 12:05:30 PM

5.500" 20.00lbs/ft (0.361" Wall) P110 USS-CDC®

MECHANICAL PROPERTIES	Pipe	USS-CDC®	
Minimum Yield Strength	110,000	--	psi
Maximum Yield Strength	140,000	--	psi
Minimum Tensile Strength	125,000	--	psi

DIMENSIONS	Pipe	USS-CDC®	
Outside Diameter	5.500	6.050	in.
Wall Thickness	0.361	--	in.
Inside Diameter	4.778	4.778	in.
Standard Drift	4.653	4.653	in.
Alternate Drift	--	--	in.
Coupling Length	--	9.250	in.
Nominal Linear Weight, T&C	20.00	--	lbs/ft
Plain End Weight	19.83	--	lbs/ft

SECTION AREA	Pipe	USS-CDC®	
Critical Area	5.828	5.828	sq. in.
Joint Efficiency	--	100.0	%

PERFORMANCE	Pipe	USS-CDC®	
Minimum Collapse Pressure	11,100	11,100	psi
External Pressure Leak Resistance	--	8,880	psi
Minimum Internal Yield Pressure	12,640	12,370	psi
Minimum Pipe Body Yield Strength	641,000	--	lbs
Joint Strength	--	667,000	lbs
Compression Rating	--	400,000	lbs
Reference Length	--	22,233	ft
Maximum Uniaxial Bend Rating	--	57.2	deg/100 ft

MAKE-UP DATA	Pipe	USS-CDC®	
Make-Up Loss	--	4.63	in.
Minimum Make-Up Torque	--	10,500	ft-lbs
Maximum Make-Up Torque	--	13,000	ft-lbs
Connection Yield Torque	--	16,100	ft-lbs

1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).
2. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
3. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
4. Reference length is calculated by joint strength divided by nominal threaded and coupled weight with 1.5 safety factor.
5. Connection external pressure leak resistance has been verified to 80% API pipe body collapse pressure following the guidelines of API 5C5 Call II.

U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380

1-877-893-9461
connections@uss.com
www.usstubular.com

Gladiator Fed Com 3502 B #1H			Casing Forces Calculations																										
Kelvin Fisher		1/25/19							Collapse					Burst					Tension										
	Top	Btm (MD)	Btm (TVD)	Casing	Wt	Wt for Calcs	Grade	Conn	MW	Collapse Force	Collapse Rating	Coll SF		MW	Burst Force	Burst Rating	Burst SF	BLM BOP Pressure	MW	Buoy Factor	Interval Hook Load in Air	Cum Hook Load in Air	Cum Hook Load in Mud	Joint Strength	Joint SF (air)	Joint SF (mud)	Pipe Body Yield	Pipe Body SF (air)	Pipe Body SF (mud)
Surface	0	450	450	13 3/8	54.5	54.5	J55	ST&C	9.0	210.6	1,130	5.37		9.0	210.6	2,730	12.96		9.0	0.862	24,525		21,152	514,000	20.96	24.30	853,000	34.78	40.33
																		2,683											
Int 1	0	8,775	8,775	9 5/8	47	47.0	L80HC	BT&C	10.0	4563.0	5,740	1.258		10.0	4563.0	6,870	1.51		10.0	0.847	412,425		349,402	1,122,000	2.72	3.21	1,086,000	2.63	3.11
																		2,835											
Prod	0	8,775	8,775	7	26	26.0	P110	USS CDC	10.0	4563.0	6,230	1.37		10.0	4563.0	9,960	2.18		10.0	0.847	328,150	241,650	204,723	853,000	3.53	4.17	830,000	3.64	4.05
Prod	8,775	10,610	9,450	5 1/2	20	20.0	P110	USS CDC	10.0	4914.0	11,100	2.26		10.0	4914.0	9,960	2.03		10.0	0.847	13,509	13,500	11,437	667,000	49.41	58.32	641,000	47.48	56.05

Gladiator Fed Com 3502 B #1H			Casing Forces Calculations																								
Kelvin Fisher		1/25/19							Collapse					Burst					Tension								
	Top	Bsm (MD)	Bsm (TVD)	Casing	Wt	Wt for Calcs	Grade	Conn	Mw	Collapse Force	Collapse Rating	Cplf SF		Mw	Burst Force	Burst Rating	Burst SF	BLM BLW Pressure	Mw	Buoy Factor	Interval Hook Load In Air	Cum Hook Load In Air	Cum Hook Load In Mud	Joint Strength	Joint SF (air)	Joint SF (mud)	Pipe Body Yield	Pipe Body SF (air)	Pipe Body SF (mud)
Surface	0	9,450	9,450	13 3/8	54.5	54.5	J55	ST&C	9.0	2106	1,130	5.37		9.0	2106	2,730	12.96	2,693	9.0	0.862	24,525		21,152	514,000	20.96	24.30	853,000	34.78	40.33
Int 1	0	8,775	8,775	9 5/8	47	47.0	L80HC	BT&C	10.0	4563.0	5,740	1.259		10.0	4563.0	6,870	1.51	2,895	10.0	0.847	412,425		349,402	1,122,000	2.72	3.21	1,086,000	2.63	3.11
Prod	0	8,775	8,775	7	26	26.0	P110	USS CDC	10.0	4563.0	6,230	1.37		10.0	4563.0	9,960	2.18		10.0	0.847	226,150	241,650	204,723	853,000	3.93	14.17	830,000	3.67	4.05
Prod	8,775	19,610	9,450	5 1/2	20	20.0	P110	USS CDC	10.0	4934.0	11,100	2.26		10.0	4934.0	9,960	2.09		10.0	0.847	13,500	13,500	11,437	667,000	49.41	58.32	641,000	47.48	56.05

Gladiator Fed Com 3502 B #1H — Casing Forces Calculations

Kelvin Fisher — 1/25/19

	Top	Btm (MD)	Btm (TVD)	Casing	Wt	Wt for Calcs	Grade	Conn	Collapse MW	Collapse Force	Collapse Rating	Coll SF	Burst MW	Burst Force	Burst Rating	Burst SF	BLM BOP Pressure	Tension MW	Buoy Factor	Interval Hook Load in Air	Cum Hook Load in Air	Cum Hook Load in Mud	Joint Strength	Joint SF (air)	Joint SF (mud)	Pipe Body Strength	Pipe Body SF (air)	Pipe Body SF (mud)
Surface	0	450	450	13 3/8	54.5	54.5	J55	STC	9.0	210.0	1,130	5.37	9.0	210.0	2,730	12.96	2,683	9.0	0.862	24,525		21,153	514,000	20.96	24.30	853,000	34.78	40.33
Int 1	0	8,775	8,775	9 5/8	47	47.0	L80HC	BT&C	10.0	4563.0	5,740	1.258	10.0	4563.0	6,870	1.51	2,895	10.0	0.847	412,425		349,402	1,122,000	2.72	3.21	1,086,000	2.63	3.11
Prod	0	8,775	8,775	7	26	26.0	P110	USS CDC	10.0	4563.0	6,230	1.37	10.0	4563.0	9,960	2.18		10.0	0.847	228,150	241,650	204,723	853,000	3.93	4.17	830,000	3.64	4.05
Prod	8,775	19,610	9,450	5 1/2	20	20.0	P110	USS CDC	10.0	4914.0	11,100	2.28	10.0	4914.0	9,960	2.03		10.0	0.847	13,500	13,500	11,437	667,000	49.41	58.32	641,000	47.48	56.05

Gladiator Fed Com 3502 B #1H				Casing Forces Calculations					Collapse				Burst					Tension										
Kelvin Fisher		1/25/19																										
	Top	Btm (MD)	Btm (TVD)	Casing	Wt	Wt for Calcs	Grade	Conn	MW	Collapse Force	Collapse Rating	Coll SF	MW	Burst Force	Burst Rating	Burst SF	BLM BOP Pressure	MW	Buoy Factor	Interval Hook Load in Air	Cum Hook Load in Air	Cum Hook Load in Mud	Joint Strength	Joint SF (air)	Joint SF (mud)	Pipe Body Yield	Pipe Body SF (air)	Pipe Body SF (mud)
Surface	0	450	450	13 3/8	54.5	54.5	J55	ST&C	9.0	210.6	1,130	5.37	9.0	210.6	2,730	12.96	2,693	9.0	0.862	24,525		23,152	514,000	20.96	21.30	853,000	34.78	40.33
Int 1	0	8,775	8,775	9 5/8	47	47.0	L80HC	BT&C	10.0	4563.0	5,740	1.258	10.0	4563.0	6,870	1.51	2,835	10.0	0.847	412,425		349,402	1,122,000	2.72	3.21	1,086,000	2.63	3.11
Prod	0	8,775	8,775	7	26	26.0	P110	USS CDC	10.0	4563.0	6,230	1.37	10.0	4563.0	9,960	2.18		10.0	0.847	228,150	241,650	204,723	853,000	3.74	4.17	830,000	3.64	4.05
Prod	8,775	19,610	9,450	5 1/2	20	20.0	P110	USS CDC	10.0	4914.0	11,100	2.26	10.0	4914.0	9,960	2.03		10.0	0.847	13,509	13,500	11,437	667,000	49.41	58.32	641,000	47.48	56.05

RIDGE RUNNER RESOURCES

Ridge Runner Resources Operating, LLC
Gladiator Fed Com 3502
SHL 35-22s-28e Eddy County, NM
H_2S Drilling Operations Plan

a. All personnel will be trained in H_2S working conditions as required by Onshore Order 6 before drilling out of the surface casing.

b. Two briefing areas will be established. Each will be at least 150' from the wellhead, perpendicular from one another, and easily entered and exited. See H_2S page 5 for more details.

c. H_2S Safety Equipment/Systems:

i. Well Control Equipment
- Flare line will be ≥150' from the wellhead and ignited by a pilot light.
- Beware of SO_2 created by flaring.
- Choke manifold will include a remotely operated choke.
- Mud gas separator

ii. Protective Equipment for Essential Personnel
- Every person on site will be required to wear a personal H_2S and SO_2 monitor at all times while on site. Monitors will not be worn on hard hats. Monitors will be worn on the front of the chest.
- One self-contained breathing apparatus (SCBA) 30-minute rescue pack will be at each briefing area. Two 30-minute SCBA packs will be stored in the safety trailer.
- Four work/escape packs will be on the rig floor. Each pack will have a long enough hose to allow unimpaired work activity.
- Four emergency escape packs will be in the doghouse for emergency evacuation.
- Hand signals will be used when wearing protective breathing apparatus.
- Stokes litter or stretcher
- Two full OSHA compliant body harnesses
- A 100-foot long x 5/8" OSHA compliant rope
- One 20-pound ABC fire extinguisher

RIDGE RUNNER RESOURCES

iii. H_2S Detection & Monitoring Equipment

- Every person on site will be required to wear a personal H_2S and SO_2 monitor at all times while on site. Monitors will not be worn on hard hats. Monitors will be worn on the front of the chest.
- A stationary detector with three sensors will be in the doghouse.
- Sensors will be installed on the rig floor, bell nipple, and at the end of the flow line or where drilling fluids are discharged.
- Visual alarm will be triggered at 10 ppm.
- Audible alarm will be triggered at 10 ppm.
- Calibration will occur at least every 30 days. Gas sample tubes will be kept in the safety trailer.

iv. Visual Warning System

- Color-coded H_2S condition sign will be set at the entrance to the pad.
- Color-coded condition flag will be installed to indicate current H_2S conditions.
- Two wind socks will be installed that will be visible from all sides.

v. Mud Program

- A water based mud with a pH of $\geq$10 will be maintained to control corrosion, H_2S gas returns to the surface, and minimize sulfide stress cracking and embrittlement.
- Drilling mud containing H_2S gas will be degassed at an optimum location for the rig configuration.
- This gas will be piped into the flare system.
- Enough mud additives will be on location to scavenge and/or neutralize H_2S where formation pressures are unknown.

vi. Metallurgy

- All equipment that has the potential to be exposed to H_2S will be suitable for H_2S service.
- Equipment that will meet these metallurgical standards include the drill string, casing, wellhead, BOP assembly, casing head and spool, rotating head, kill lines, choke, choke manifold and lines, valves, mud-gas separators, DST tools, test units, tubing, flanges, and other related equipment (elastomer packings and seals).

RIDGE RUNNER RESOURCES

vii. Communication from well site

- Cell phones and/or two-way radios will be used to communicate from the well site.

d. A remote-controlled choke, mud-gas separator, and a rotating head will be installed before drilling or testing any formation expected to contain H_2S.

Company Personnel to be Notified

Ridge Runner's Midland, TX Office	Office: (432) 684-7877
	In emergency, push #
Kelvin Fisher, Chief Operating Officer	Office: (432) 684-7877
	Mobile: (432)634-5621
Gary Moreau, Production Foreman	(575) 631-5643

Local & County Agencies

Loving Fire Department	911 or (575) 745-3600
Eddy County Sheriff (Carlsbad)	911 (575) 887-7551
Eddy County Emergency Management (Carlsbad)	(575) 887-9511
Carlsbad Medical Center Hospital	(575) 887-4100
Eddy County South Road Department (Carlsbad)	(575) 885-4835

RIDGE RUNNER RESOURCES

State Agencies

NM State Police (Carlsbad)	(575) 885-3138
NM Oil Conservation (Artesia)	(575) 748-1283
NM Oil Conservation (Santa Fe)	(505) 476-3440
NM Dept. of Transportation (Roswell)	(575) 637-7201

Federal Agencies

BLM Carlsbad Field Office	(575) 234-5972
National Response Center	(800) 424-8802
US EPA Region 6 (Dallas)	(800) 887-6063
	(214) 665-6444

Residents within 1 mile

none

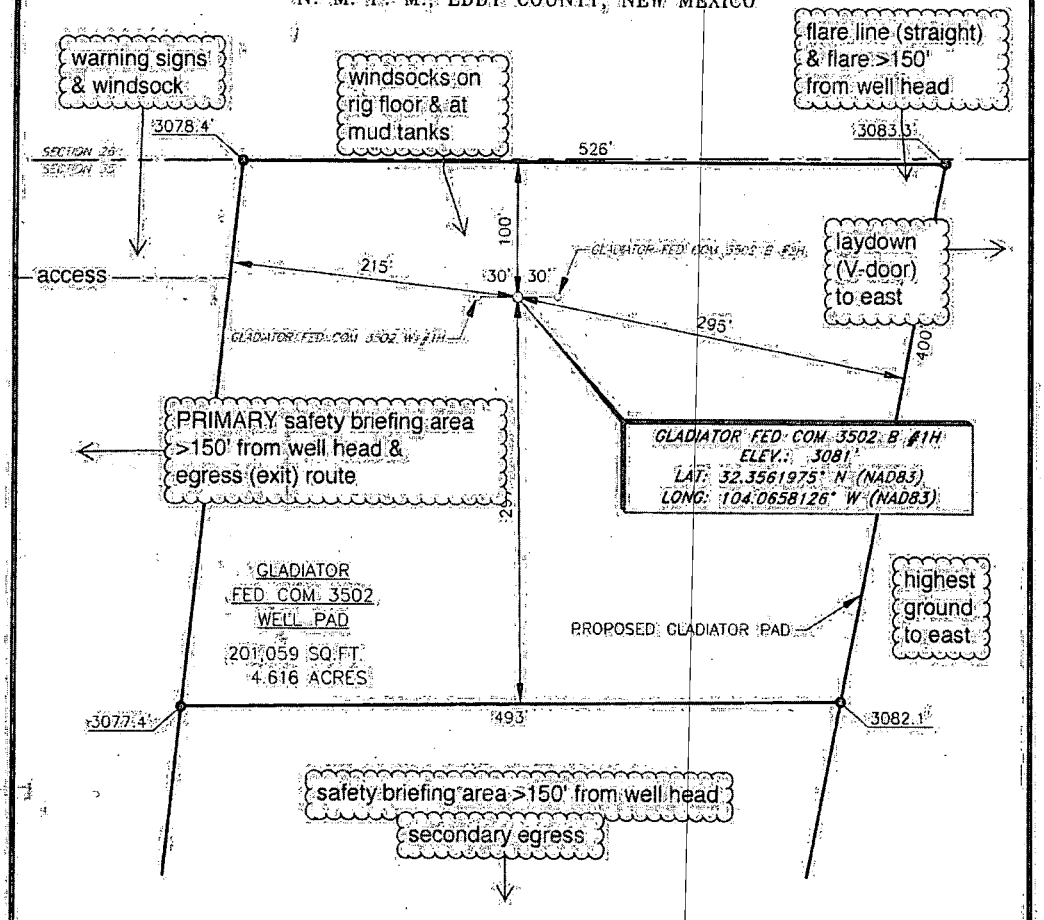
Air Evacuation

Med Flight Air Ambulance (Albuquerque)	(800) 842-4431
Lifeguard (Albuquerque)	(888) 866-7256

Veterinarians

Desert Willow Veterinary Services (Carlsbad)	(575) 885-3399
Animal Care Center (Carlsbad)	(575) 885-5352

RIDGE RUNNER RESOURCES OPERATING, LLC.
GLADIATOR FED COM 3502 B #1H
(100' FNL & 360' FWL)
SECTION 35, T22S, R28E
N. M. P. M., EDDY COUNTY, NEW MEXICO



N

Prevailing Wind Out of the South

SCALE: 1" = 100'
0 50' 100'

BEARINGS ARE GRID NAD 83 NM, EAST.
DISTANCES ARE HORIZ. GROUND.

DIRECTIONS TO LOCATION

From the intersection of State Highway 31 (Potash Mines Rd.) and CR-605 (Refinery Rd.),
Go Northwest on CR-605 approx. 3.6 miles to lease road on the right.
Turn right and go East approx. 0.5 miles to proposed road on the right.
Turn right and go East approx. 250 feet to proposed location.

THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA IS SHOWN FROM A PREVIOUS SURVEY REFERENCED HEREON.

I, Jeffrey L. Fansler, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision; said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Jeffrey L. Fansler NM PS 10034

JEFFREY L. FANSLER NEW MEXICO 10034 12/13/18 PROFESSIONAL SURVEYOR

DATE: 12-11-2018

NO.	REVISION	DATE
1	WELL NAME+ACR	12.20.18
2	WELL NAME	1.2.19
3	MOVE SL	1.21.19
4		

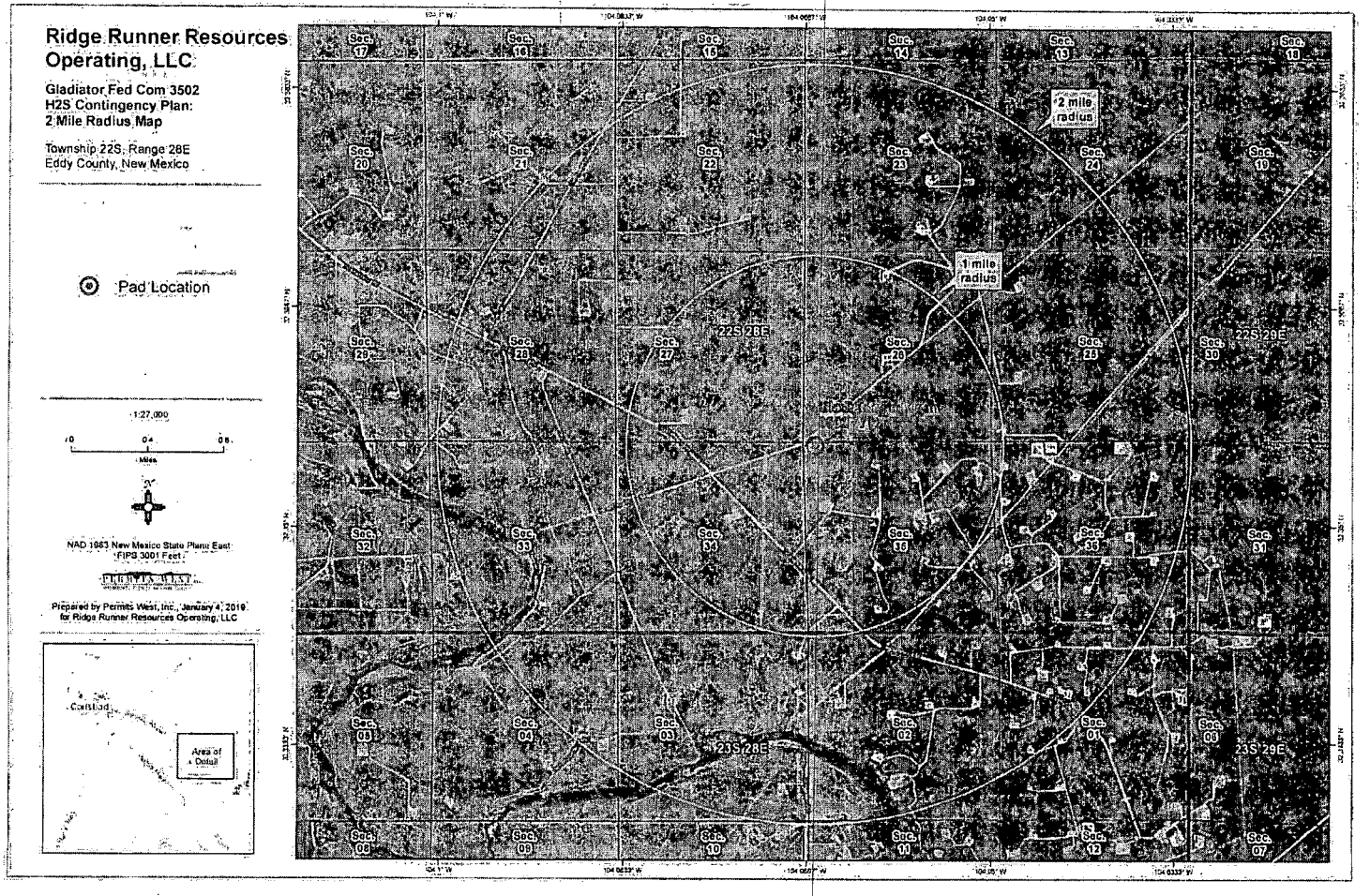
RRC SURVEYING, LLC
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'	
SURVEYED BY: AB/RU	
DRAWN BY: CAR	
APPROVED BY: JLF	
JOB NO.: LS18111309	
SHEET: B 1H PAD	

Ridge Runner Resources Operating, LLC

Gladiator Fed Com 3502
H2S Contingency Plan:
2 Mile Radius Map

Township 22S, Range 28E
Eddy County, New Mexico



RIDGE RUNNER RESOURCES

Project:	Eddy County, NM (NAD83)
Site:	Gladiator Fed Com
Well:	Gladiator Fed Com 3502B 1H
Depth Reference:	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
SHL Northing:	493419.70
SHL Easting:	623943.70
Rig:	Rig TBD
Plan:	plan1

SCOUT DOWNHOLE INC

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8877.04	0.00	0.00	8877.04	0.00	0.00	0.00	0.00	0.00	Start Build 10.00
9777.04	90.00	181.00	9450.00	-572.87	-10.00	10.00	181.00	572.82	Start DLS 2.00 TFO -90.00
9912.69	90.00	178.29	9450.00	-708.56	-9.16	2.00	-90.00	708.45	Start 4471.19 hold at 9912.69 MD
14383.88	90.00	178.29	9450.00	-5177.70	124.50	0.00	0.00	5178.22	Start DLS 2.00 TFO 90.00
14513.08	90.00	180.87	9450.00	-5306.88	125.45	2.00	90.00	5307.39	Start 5097.32 hold at 14513.08 MD
19610.39	90.00	180.87	9450.00	-10403.60	48.00	0.00	0.00	10403.71	TD @ 19610.39' MD

FORMATION TOP DETAILS

No formation data is available

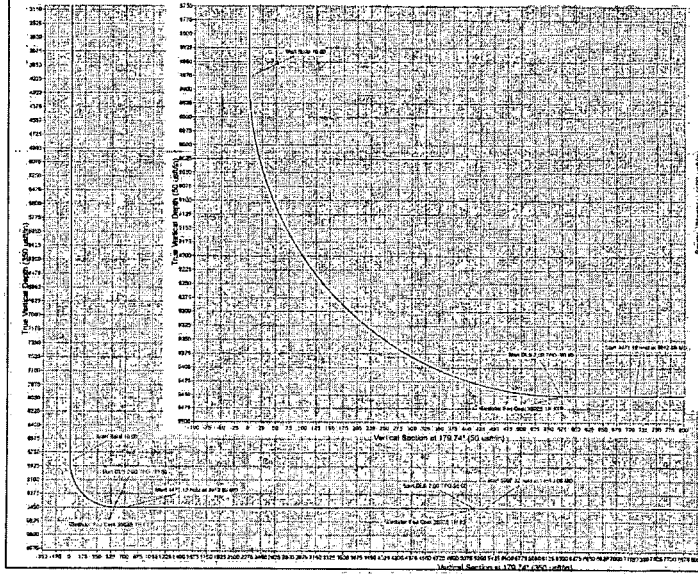
DESIGN TARGET DETAILS

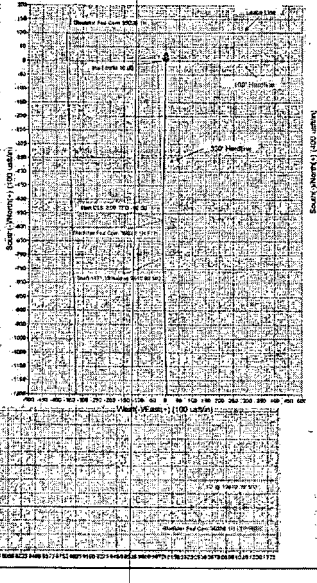
Name	TVD	+N/-S	+E/-W	Easting	Northing
Gladiator Fed Com 3502B 1H #3	9450.00	-5177.70	124.50	488242.00	624089.20
Gladiator Fed Com 3502B 1H FTP	9450.00	-575.00	-12.40	492844.70	623931.30
Gladiator Fed Com 3502B 1H LTP/PBHL	9450.00	-10405.60	48.00	483018.10	623891.70

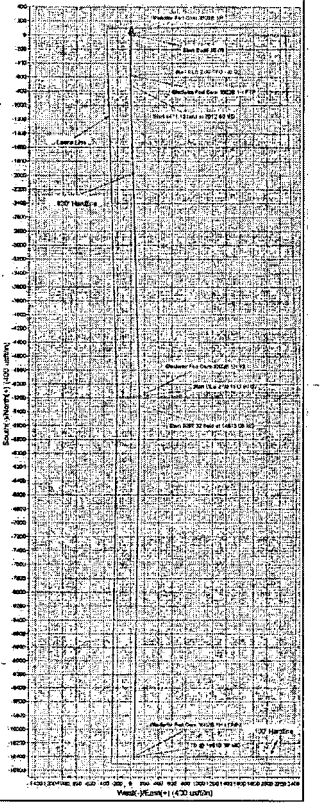
T G M

Azimuths to Grid North
True North: -0.14°
Magnetic North: 7.07°

Magnetic Field
Strength: 47560.0snT
Dip Angle: 60.12°
Date: 01/23/2019
Model: HDGM







Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well Gladiator Fed Com 3502B 1H
Company:	Ridge Runner Resources	**TVD Reference:**	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
Project:	Eddy County, NM (NAD83)	**MD Reference:**	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
Site:	Gladiator Fed Com	**North Reference:**	Grid
Well:	Gladiator Fed Com 3502B 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	plan1		

Project Eddy County, NM (NAD83)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Gladiator Fed Com

Site Position:		**Northing:**	493,419.40 usft	**Latitude:**	32° 21' 22.309 N
From:	Map	**Easting:**	623,913.70 usft	**Longitude:**	104° 3' 57.275 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.14 °

Well Gladiator Fed Com 3502B 1H

Well Position	**+N/-S**	0.30 usft	**Northing:**	493,419.70 usft	**Latitude:**	32° 21' 22.311 N
	+E/-W	30.00 usft	**Easting:**	623,943.70 usft	**Longitude:**	104° 3' 56.925 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,081.00 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	01/23/19	7.22	60.12	47,960.90000000

Design plan1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.74

Plan Survey Tool Program **Date** 01/23/19

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,610.39	plan1 (Wellbore #1)	MWD MWD - Standard	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,877.04	0.00	0.00	8,877.04	0.00	0.00	0.00	0.00	0.00	0.00	
9,777.04	90.00	181.00	9,450.00	-572.87	-10.00	10.00	10.00	0.00	181.00	
9,912.69	90.00	178.29	9,450.00	-708.50	-9.16	2.00	0.00	-2.00	-90.00	
14,383.88	90.00	178.29	9,450.00	-5,177.70	124.50	0.00	0.00	0.00	0.00	
14,513.06	90.00	180.87	9,450.00	-5,306.86	125.45	2.00	0.00	2.00	90.00	
19,610.39	90.00	180.87	9,450.00	-10,403.60	48.00	0.00	0.00	0.00	0.00	

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well Gladiator Fed Com 3502B 1H
Company:	Ridge Runner Resources	**TVD Reference:**	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
Project:	Eddy County, NM (NAD83)	**MD Reference:**	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
Site:	Gladiator Fed Com	**North Reference:**	Grid
Well:	Gladiator Fed Com 3502B 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	plan1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well Gladiator Fed Com 3502B 1H
Company:	Ridge Runner Resources	**TVD Reference:**	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
Project:	Eddy County, NM (NAD83)	**MD Reference:**	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
Site:	Gladiator Fed Com	**North Reference:**	Grid
Well:	Gladiator Fed Com 3502B 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	plan1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,877.04	0.00	0.00	8,877.04	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 10.00									
8,900.00	2.30	181.00	8,899.99	-0.46	-0.01	0.46	10.00	10.00	0.00
9,000.00	12.30	181.00	8,999.06	-13.14	-0.23	13.14	10.00	10.00	0.00
9,100.00	22.30	181.00	9,094.42	-42.83	-0.75	42.83	10.00	10.00	0.00
9,200.00	32.30	181.00	9,183.17	-88.62	-1.55	88.62	10.00	10.00	0.00
9,300.00	42.30	181.00	9,262.62	-149.13	-2.60	149.12	10.00	10.00	0.00
9,400.00	52.30	181.00	9,330.35	-222.51	-3.88	222.49	10.00	10.00	0.00
9,500.00	62.30	181.00	9,384.31	-306.54	-5.35	306.51	10.00	10.00	0.00
9,600.00	72.30	181.00	9,422.86	-398.66	-6.96	398.62	10.00	10.00	0.00
9,700.00	82.30	181.00	9,444.83	-496.07	-8.66	496.03	10.00	10.00	0.00
9,777.04	90.00	181.00	9,450.00	-572.87	-10.00	572.82	10.00	10.00	0.00
Start DLS 2.00 TFO -90.00									
9,779.20	90.00	180.96	9,450.00	-575.03	-10.04	574.98	2.00	0.00	-2.00
Gladiator Fed Com 3502B 1H FTP									
9,800.00	90.00	180.54	9,450.00	-595.83	-10.31	595.77	2.00	0.00	-2.00
9,900.00	90.00	178.54	9,450.00	-695.82	-9.51	695.77	2.00	0.00	-2.00
9,912.69	90.00	178.29	9,450.00	-708.50	-9.16	708.45	2.00	0.00	-2.00

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well Gladiator Fed Com 3502B 1H
Company:	Ridge Runner Resources	**TVD Reference:**	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
Project:	Eddy County, NM (NAD83)	**MD Reference:**	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
Site:	Gladiator Fed Com	**North Reference:**	Grid
Well:	Gladiator Fed Com 3502B 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	plan1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Start 4471.19 hold at 9912.69 MD									
10,000.00	90.00	178.29	9,450.00	-795.78	-6.55	795.74	0.00	0.00	0.00
10,100.00	90.00	178.29	9,450.00	-895.73	-3.56	895.71	0.00	0.00	0.00
10,200.00	90.00	178.29	9,450.00	-995.69	-0.57	995.67	0.00	0.00	0.00
10,300.00	90.00	178.29	9,450.00	-1,095.64	2.42	1,095.64	0.00	0.00	0.00
10,400.00	90.00	178.29	9,450.00	-1,195.60	5.41	1,195.61	0.00	0.00	0.00
10,500.00	90.00	178.29	9,450.00	-1,295.55	8.40	1,295.58	0.00	0.00	0.00
10,600.00	90.00	178.29	9,450.00	-1,395.51	11.39	1,395.55	0.00	0.00	0.00
10,700.00	90.00	178.29	9,450.00	-1,495.46	14.38	1,495.51	0.00	0.00	0.00
10,800.00	90.00	178.29	9,450.00	-1,595.42	17.37	1,595.48	0.00	0.00	0.00
10,900.00	90.00	178.29	9,450.00	-1,695.37	20.36	1,695.45	0.00	0.00	0.00
11,000.00	90.00	178.29	9,450.00	-1,795.33	23.35	1,795.42	0.00	0.00	0.00
11,100.00	90.00	178.29	9,450.00	-1,895.28	26.34	1,895.39	0.00	0.00	0.00
11,200.00	90.00	178.29	9,450.00	-1,995.24	29.33	1,995.35	0.00	0.00	0.00
11,300.00	90.00	178.29	9,450.00	-2,095.20	32.31	2,095.32	0.00	0.00	0.00
11,400.00	90.00	178.29	9,450.00	-2,195.15	35.30	2,195.29	0.00	0.00	0.00
11,500.00	90.00	178.29	9,450.00	-2,295.11	38.29	2,295.26	0.00	0.00	0.00
11,600.00	90.00	178.29	9,450.00	-2,395.06	41.28	2,395.23	0.00	0.00	0.00
11,700.00	90.00	178.29	9,450.00	-2,495.02	44.27	2,495.19	0.00	0.00	0.00
11,800.00	90.00	178.29	9,450.00	-2,594.97	47.26	2,595.16	0.00	0.00	0.00
11,900.00	90.00	178.29	9,450.00	-2,694.93	50.25	2,695.13	0.00	0.00	0.00
12,000.00	90.00	178.29	9,450.00	-2,794.88	53.24	2,795.10	0.00	0.00	0.00
12,100.00	90.00	178.29	9,450.00	-2,894.84	56.23	2,895.07	0.00	0.00	0.00
12,200.00	90.00	178.29	9,450.00	-2,994.79	59.22	2,995.03	0.00	0.00	0.00
12,300.00	90.00	178.29	9,450.00	-3,094.75	62.21	3,095.00	0.00	0.00	0.00
12,400.00	90.00	178.29	9,450.00	-3,194.70	65.20	3,194.97	0.00	0.00	0.00
12,500.00	90.00	178.29	9,450.00	-3,294.66	68.19	3,294.94	0.00	0.00	0.00
12,600.00	90.00	178.29	9,450.00	-3,394.61	71.18	3,394.91	0.00	0.00	0.00
12,700.00	90.00	178.29	9,450.00	-3,494.57	74.16	3,494.87	0.00	0.00	0.00
12,800.00	90.00	178.29	9,450.00	-3,594.53	77.15	3,594.84	0.00	0.00	0.00
12,900.00	90.00	178.29	9,450.00	-3,694.48	80.14	3,694.81	0.00	0.00	0.00
13,000.00	90.00	178.29	9,450.00	-3,794.44	83.13	3,794.78	0.00	0.00	0.00
13,100.00	90.00	178.29	9,450.00	-3,894.39	86.12	3,894.75	0.00	0.00	0.00
13,200.00	90.00	178.29	9,450.00	-3,994.35	89.11	3,994.71	0.00	0.00	0.00
13,300.00	90.00	178.29	9,450.00	-4,094.30	92.10	4,094.68	0.00	0.00	0.00
13,400.00	90.00	178.29	9,450.00	-4,194.26	95.09	4,194.65	0.00	0.00	0.00
13,500.00	90.00	178.29	9,450.00	-4,294.21	98.08	4,294.62	0.00	0.00	0.00
13,600.00	90.00	178.29	9,450.00	-4,394.17	101.07	4,394.59	0.00	0.00	0.00
13,700.00	90.00	178.29	9,450.00	-4,494.12	104.06	4,494.56	0.00	0.00	0.00
13,800.00	90.00	178.29	9,450.00	-4,594.08	107.05	4,594.52	0.00	0.00	0.00
13,900.00	90.00	178.29	9,450.00	-4,694.03	110.04	4,694.49	0.00	0.00	0.00
14,000.00	90.00	178.29	9,450.00	-4,793.99	113.02	4,794.46	0.00	0.00	0.00
14,100.00	90.00	178.29	9,450.00	-4,893.94	116.01	4,894.43	0.00	0.00	0.00
14,200.00	90.00	178.29	9,450.00	-4,993.90	119.00	4,994.40	0.00	0.00	0.00
14,300.00	90.00	178.29	9,450.00	-5,093.85	121.99	5,094.36	0.00	0.00	0.00
14,383.88	90.00	178.29	9,450.00	-5,177.70	124.50	5,178.22	0.00	0.00	0.00
Start DLS 2.00 TFO 90.00 - Gladiator Fed Com 3502B 1H #3									
14,400.00	90.00	178.61	9,450.00	-5,193.81	124.94	5,194.33	2.00	0.00	2.00
14,500.00	90.00	180.61	9,450.00	-5,293.80	125.62	5,294.33	2.00	0.00	2.00
14,513.06	90.00	180.87	9,450.00	-5,306.86	125.45	5,307.39	2.00	0.00	2.00
Start 5097.32 hold at 14513.06 MD									
14,600.00	90.00	180.87	9,450.00	-5,393.79	124.13	5,394.31	0.00	0.00	0.00
14,700.00	90.00	180.87	9,450.00	-5,493.78	122.61	5,494.29	0.00	0.00	0.00

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well Gladiator Fed Com 3502B 1H
Company:	Ridge Runner Resources	**TVD Reference:**	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
Project:	Eddy County, NM (NAD83)	**MD Reference:**	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
Site:	Gladiator Fed Com	**North Reference:**	Grid
Well:	Gladiator Fed Com 3502B 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	plan1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,800.00	90.00	180.87	9,450.00	-5,593.77	121.09	5,594.27	0.00	0.00	0.00
14,900.00	90.00	180.87	9,450.00	-5,693.76	119.57	5,694.25	0.00	0.00	0.00
15,000.00	90.00	180.87	9,450.00	-5,793.75	118.05	5,794.23	0.00	0.00	0.00
15,100.00	90.00	180.87	9,450.00	-5,893.74	116.53	5,894.21	0.00	0.00	0.00
15,200.00	90.00	180.87	9,450.00	-5,993.72	115.01	5,994.19	0.00	0.00	0.00
15,300.00	90.00	180.87	9,450.00	-6,093.71	113.49	6,094.17	0.00	0.00	0.00
15,400.00	90.00	180.87	9,450.00	-6,193.70	111.97	6,194.15	0.00	0.00	0.00
15,500.00	90.00	180.87	9,450.00	-6,293.69	110.45	6,294.13	0.00	0.00	0.00
15,600.00	90.00	180.87	9,450.00	-6,393.68	108.93	6,394.11	0.00	0.00	0.00
15,700.00	90.00	180.87	9,450.00	-6,493.67	107.41	6,494.09	0.00	0.00	0.00
15,800.00	90.00	180.87	9,450.00	-6,593.65	105.90	6,594.07	0.00	0.00	0.00
15,900.00	90.00	180.87	9,450.00	-6,693.64	104.38	6,694.05	0.00	0.00	0.00
16,000.00	90.00	180.87	9,450.00	-6,793.63	102.86	6,794.03	0.00	0.00	0.00
16,100.00	90.00	180.87	9,450.00	-6,893.62	101.34	6,894.01	0.00	0.00	0.00
16,200.00	90.00	180.87	9,450.00	-6,993.61	99.82	6,993.99	0.00	0.00	0.00
16,300.00	90.00	180.87	9,450.00	-7,093.60	98.30	7,093.97	0.00	0.00	0.00
16,400.00	90.00	180.87	9,450.00	-7,193.59	96.78	7,193.95	0.00	0.00	0.00
16,500.00	90.00	180.87	9,450.00	-7,293.57	95.26	7,293.94	0.00	0.00	0.00
16,600.00	90.00	180.87	9,450.00	-7,393.56	93.74	7,393.92	0.00	0.00	0.00
16,700.00	90.00	180.87	9,450.00	-7,493.55	92.22	7,493.90	0.00	0.00	0.00
16,800.00	90.00	180.87	9,450.00	-7,593.54	90.70	7,593.88	0.00	0.00	0.00
16,900.00	90.00	180.87	9,450.00	-7,693.53	89.18	7,693.86	0.00	0.00	0.00
17,000.00	90.00	180.87	9,450.00	-7,793.52	87.66	7,793.84	0.00	0.00	0.00
17,100.00	90.00	180.87	9,450.00	-7,893.50	86.14	7,893.82	0.00	0.00	0.00
17,200.00	90.00	180.87	9,450.00	-7,993.49	84.62	7,993.80	0.00	0.00	0.00
17,300.00	90.00	180.87	9,450.00	-8,093.48	83.10	8,093.78	0.00	0.00	0.00
17,400.00	90.00	180.87	9,450.00	-8,193.47	81.58	8,193.76	0.00	0.00	0.00
17,500.00	90.00	180.87	9,450.00	-8,293.46	80.07	8,293.74	0.00	0.00	0.00
17,600.00	90.00	180.87	9,450.00	-8,393.45	78.55	8,393.72	0.00	0.00	0.00
17,700.00	90.00	180.87	9,450.00	-8,493.43	77.03	8,493.70	0.00	0.00	0.00
17,800.00	90.00	180.87	9,450.00	-8,593.42	75.51	8,593.68	0.00	0.00	0.00
17,900.00	90.00	180.87	9,450.00	-8,693.41	73.99	8,693.66	0.00	0.00	0.00
18,000.00	90.00	180.87	9,450.00	-8,793.40	72.47	8,793.64	0.00	0.00	0.00
18,100.00	90.00	180.87	9,450.00	-8,893.39	70.95	8,893.62	0.00	0.00	0.00
18,200.00	90.00	180.87	9,450.00	-8,993.38	69.43	8,993.60	0.00	0.00	0.00
18,300.00	90.00	180.87	9,450.00	-9,093.37	67.91	9,093.58	0.00	0.00	0.00
18,400.00	90.00	180.87	9,450.00	-9,193.35	66.39	9,193.56	0.00	0.00	0.00
18,500.00	90.00	180.87	9,450.00	-9,293.34	64.87	9,293.54	0.00	0.00	0.00
18,600.00	90.00	180.87	9,450.00	-9,393.33	63.35	9,393.52	0.00	0.00	0.00
18,700.00	90.00	180.87	9,450.00	-9,493.32	61.83	9,493.50	0.00	0.00	0.00
18,800.00	90.00	180.87	9,450.00	-9,593.31	60.31	9,593.48	0.00	0.00	0.00
18,900.00	90.00	180.87	9,450.00	-9,693.30	58.79	9,693.46	0.00	0.00	0.00
19,000.00	90.00	180.87	9,450.00	-9,793.28	57.27	9,793.44	0.00	0.00	0.00
19,100.00	90.00	180.87	9,450.00	-9,893.27	55.75	9,893.43	0.00	0.00	0.00
19,200.00	90.00	180.87	9,450.00	-9,993.26	54.24	9,993.41	0.00	0.00	0.00
19,300.00	90.00	180.87	9,450.00	-10,093.25	52.72	10,093.39	0.00	0.00	0.00
19,400.00	90.00	180.87	9,450.00	-10,193.24	51.20	10,193.37	0.00	0.00	0.00
19,500.00	90.00	180.87	9,450.00	-10,293.23	49.68	10,293.35	0.00	0.00	0.00
19,600.00	90.00	180.87	9,450.00	-10,393.22	48.16	10,393.33	0.00	0.00	0.00
19,610.39	90.00	180.87	9,450.00	-10,403.60	48.00	10,403.71	0.00	0.00	0.00

TD @ 19610.39' MD - Gladiator Fed Com 3502B 1H LTP/PBHL

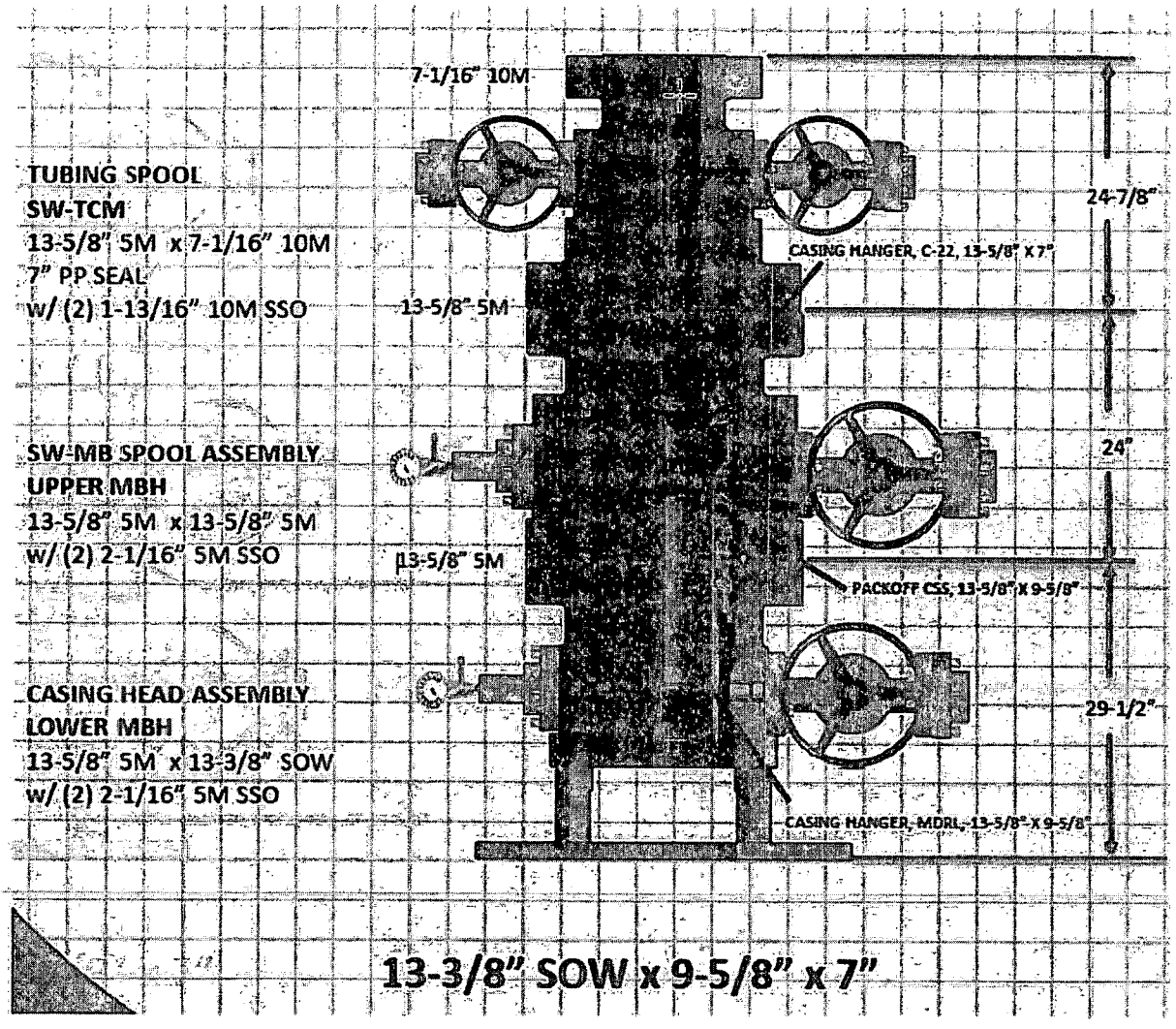
Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well Gladiator Fed Com 3502B 1H
Company:	Ridge Runner Resources	**TVD Reference:**	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
Project:	Eddy County, NM (NAD83)	**MD Reference:**	GL 3081' + 30' KB @ 3111.00usft (Rig TBD)
Site:	Gladiator Fed Com	**North Reference:**	Grid
Well:	Gladiator Fed Com 3502B 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	plan1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Gladiator Fed Com 35 - plan misses target center by 2.36usft at 9779.20usft MD (9450.00 TVD, -575.03 N, -10.04 E) - Point	0.00	0.00	9,450.00	-575.00	-12.40	492,844.70	623,931.30	32° 21' 16.622 N	104° 3' 57.086 W
Gladiator Fed Com 35 - plan hits target center - Point	0.00	0.00	9,450.00	-5,177.70	124.50	488,242.00	624,068.20	32° 20' 31.071 N	104° 3' 55.624 W
Gladiator Fed Com 35 - plan hits target center - Point	0.00	0.00	9,450.00	-10,403.60	48.00	483,016.10	623,991.70	32° 19' 39.358 N	104° 3' 56.668 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
8,877.04	8,877.04	0.00	0.00	Start Build 10.00
9,777.04	9,450.00	-572.87	-10.00	Start DLS 2.00 TFO -90.00
9,912.69	9,450.00	-708.50	-9.16	Start 4471.19 hold at 9912.69 MD
14,383.88	9,450.00	-5,177.70	124.50	Start DLS 2.00 TFO 90.00
14,513.06	9,450.00	-5,306.86	125.45	Start 5097.32 hold at 14513.06 MD
19,610.39	9,450.00	-10,403.60	48.00	TD @ 19610.39 MD


TUBING SPOOL
SW-TCM
13-5/8" 5M x 7-1/16" 10M
7" PP SEAL
w/ (2) 1-13/16" 10M SSO
SW-MB SPOOL ASSEMBLY
UPPER MBH
13-5/8" 5M x 13-5/8" 5M
w/ (2) 2-1/16" 5M SSO
CASING HEAD ASSEMBLY
LOWER MBH
13-5/8" 5M x 13-3/8" SOW
w/ (2) 2-1/16" 5M SSO
7-1/16" 10M
13-5/8" 5M
13-5/8" 5M
CASING HANGER, C-22, 13-5/8" X 7"
PACKOFF CSS, 13-5/8" X 9-5/8"
CASING HANGER, MDRL, 13-5/8" X 9-5/8"
24-7/8"
24"
29-1/2"
13-3/8" SOW x 9-5/8" x 7"

Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	Odessa	Hose Assembly Type	Choke & Kill
MWH Sales Representative	James Hawkins	Certification	API 7K/FSL Level 2
Date Assembled	6/22/2018	Hose Grade	Red
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	382312	Hose Lot # and Date Code	12266-06/15
Customer Purchase Order #	426903	Hose I.D. (inches)	2"
Assembly Serial # (Pick Ticket #)	474037	Hose O.D. (inches)	4.11"
Hose Assembly Length	43 Feet	Armor (yes/no)	Yes

Fittings			
End A		End B	
Stem (Part and Revision #)	R2.0X32-1502M	Stem (Part and Revision #)	R2.0X32-1502F
Stem (Heat #)	60224840	Stem (Heat #)	A014853
Ferrule (Part and Revision #)	RF2.0X3875	Ferrule (Part and Revision #)	RF2.0X3875
Ferrule (Heat #)	A012890	Ferrule (Heat #)	A012890
Connection: Flange Hammer Union Part		Connection (Part #)	
Connection (Heat #)		Connection (Heat #)	
Nut (Part #)	2" 1502	Nut (Part #)	
Nut (Heat #)		Nut (Heat #)	
Dies Used	97MM	Dies Used	97MM

Hydrostatic Test Requirements		
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.
Test Pressure Hold Time (minutes)	19 1/2	

Date Tested	Tested By	Approved By
6/22/2018		

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: Odessa	Customer P.O.# 426903
Sales Order # 382312	Date Assembled: 6/22/2018

Specifications

Hose Assembly Type: Choke & Kill	Rig # N/A
Assembly Serial # 474037	Hose Lot # and Date Code 12266-06/15
Hose Working Pressure (psi) 10000	Test Pressure (psi) 15000
Hose Assembly Description:	CK32-SS-L-10K-32M1502-32F1502-43.00' FT

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:
Midwest Hose & Specialty, Inc.
3312 S I-35 Service Rd
Oklahoma City, OK 73129

Comments:

Approved By	Date
	6/22/2018

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

June 22, 2018

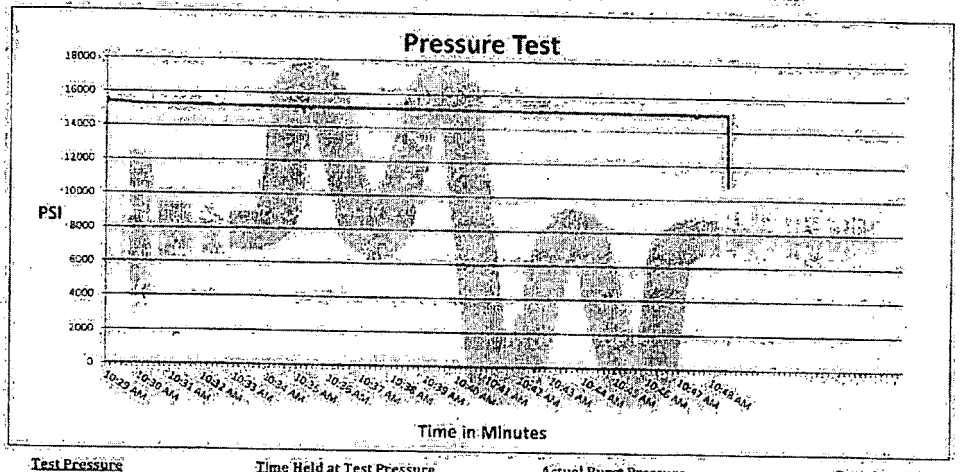
Customer: Odessa

Pick Ticket #: 474037

Hose Specifications

Hose Type	Length	Type of Fitting	Coupling Method
Mud	43'	2" 1502	Swage
I.D.	O.D.	Die Size	Final O.D.
2""	3.56"	97MM	4.02"
Working Pressure	Burst Pressure	Hose Serial #	Hose Assembly Serial #
10000 PSI	Standard Safety Multiplier Applies	12266	474037

Verification



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	19 2/4 Minutes		15556 PSI

Comments: Hose assembly pressure tested with water at ambient temperature..

Tested By: Josh Davis

Approved By: James Hawkins

Drilling Program

1. ESTIMATED TOPS

Formation Name	TVD	MD	Bearing
Quaternary caliche	000'	000'	fresh water
Rustler anhydrite	250'	250'	brackish water
Top salt	480'	480'	N/A
Delaware limestone	2700'	2700'	N/A
Bell Canyon sandstone	2725'	2725'	hydrocarbons
Cherry Canyon sandstone	3830'	3830'	hydrocarbons
Brushy Canyon sandstone	4850'	4850'	hydrocarbons
Bone Spring limestone	6245'	6245'	hydrocarbons
1st Bone Spring sandstone	7255'	7255'	hydrocarbons
2nd Bone Spring sandstone	8110'	8110'	hydrocarbons
3rd Bone Spring carbonate	8725'	8725'	hydrocarbons
(KOP	8877'	8877'	hydrocarbons)
3rd Bone Spring sandstone (goal)	9230'	9259'	hydrocarbons
TD	9450'	19610'	hydrocarbons

2. NOTABLE ZONES

Third Bone Spring sandstone is the goal. Closest water well (C 00512) is 2.17 miles south. Depth to water was not reported in the 100' deep well.

3. PRESSURE CONTROL

A 5000 psi BOP system will be installed and tested to 3000 psi parameters before drilling the intermediate hole. Annular will be tested to 50% of rated WP. Double ram preventer will be used since a non-tapered drill string will be used. Double (pipe and blind) ram BOP will be tested to 3000 psi. This is based on:

Intermediate hole: 8775' TVD x 10 ppg mud x 0.052 = 4563 psi
- 8775' x 0.22 psi/ft = 1930 psi
2633 psi

The installed 5000 psi BOP system will be tested to 5000 psi parameters before drilling the production hole. Annular will be tested to 50% of rated WP. Double (pipe and blind) ram BOP will be tested to 5000 psi. Since a non-tapered drill string will be used, a double ram preventer is adequate. This is based on:

Production hole: 9450' TVD x 12.8 ppg mud x 0.052 = 6290 psi
- 9450' x 0.22 psi/ft = 2079 psi
4211 psi

BOPE will be tested by an independent service company to 250 psi low and the high pressures stated above as required by Onshore Order 2. The system may be upgraded to a higher pressure, but will still be tested to the pressures stated above.

Pipe rams will be functioned daily. Blind rams will be functioned on each trip when out of the hole. Annular will be functioned weekly. BOP will be tested on initial installation, whenever a seal is broken, following repairs, or every 30 days.

A variance is requested to use a 13.625" 5000 psi multi-bowl wellhead. When the BOP is initially installed after running the 13.375" (surface) casing, it will be tested to the higher test pressures of either the 12.25" (intermediate) or 8.5" (production) intervals. The 9.625" (intermediate) casing will be run with a mandrel hanger and without breaking any connections on the BOP. Thus, not requiring an additional BOP test.

Rig contract has not been let due to uncertainty regarding APD approval date. A typical 5M BOP stack and choke are attached. Rig specific diagrams will be provided via Sundry Notice once the rig contract is signed.

Auxiliary equipment: Top drive will have an IBOP in lieu of Kelly cocks. A floor safety valve (i. e., TIW valve) will be available when tripping.

In the event a walking rig is used, a variance is requested to use a flexible choke line with flanged ends between the BOP and choke manifold. The line will be kept as straight as possible with minimal turns. Actual specifications and certification will be provided via Sundry Notice if this option is exercised.

4. CASING & CEMENT

All casing will be API, new, and tested to 0.22 psi/foot of a maximum of 1500 psi before drill out. See attached casing assumption worksheet. A tapered production string will be used to allow larger capacity 3.5" tubing. Premium connections will be used on the production string. See production string specification sheets.

Hole O. D.	Set MD	Set TVD	Casing O. D.	Weight (lb/ft)	Grade	Joint	SF Collapse	SF Burst	SF Tension
17.5"	0' - 450'	0' - 450'	Surface 13.375"	54.5	J-55	STC	5.37 (9.0#)	12.96 (#9.0)	24.30 (9.0#)
12.25"	0' - 8775'	0' - 8775'	Inter. 9.625"	47	HCL-80	BTC	1.258 (10.0#)	1.51 (10.0#)	3.21 (10.0#)
8.5"	0' - 8775'	0' - 8775'	Prod. 1 7"	26	P-110	USS-CDC	1.37 (10.0#)	2.18 (10.0#)	4.17 (10.0#)
8.5"	8775' - 19610'	8775' - 9450'	Prod. 2 5.5"	20	P-110	USS-CDC	2.26 (10.0#)	2.03 (10.0#)	58.32 (10.0#)

Minimum BLM safety factors: collapse = 1.125, burst = 1.0, tension air = 1.6, tension mud = 1.8

If drilling conditions dictate, Operator requests permission to set 9.625" (intermediate) casing shallower, but no less than 6250' MD/TVD. Cement volumes will be adjusted with the same excess as below to circulate on 2 strings and tie back 500' on the production string.

Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Tail	465	1.34	623	14.8	Class C + 2% CaCl
TOC = GL		100% Excess			Centralizers: shoe joint + every 3rd joint to GL	
Intermediate Stage 1 (8775' – 2700'*)	Lead	1045	2.50	2612	11.3	TXI light + 5% salt + 4% SMS + additives
	Tail	200	1.19	238	15.6	Class H + additives
TOC = 2700'		50% Excess			Centralizers: shoe joint + above & below DV tool + every 4th joint from shoe to GL	
Intermediate Stage 2 (2700' – GL)	Lead	660	2.19	1445	12.7	Class C + 6% gel + 5% salt + additives
	Tail	100	1.32	132	14.8	Class C
TOC = GL		100% Excess			Centralizers: shoe joint + above & below DV tool + every 4th joint from shoe to GL	
Production	Tail	2320	1.27	2426	14.2	50/50/2 Poz/G/gel + additives
TOC = 8275' (500' above intermediate shoe)		15% Excess			Centralizers: shoe joint + every 4th joint to 8275'	

*May adjust intermediate Stage 1 approximately 50' for hard spot in Delaware limestone below salt. DV tool will be set at 2700'.

5. MUD PROGRAM

An electronic pit volume totalizer will monitor volume, flow rate, pump pressure, and stroke rate. All necessary additives (e. g., barite, bentonite, LCM) to maintain mud quality, combat lost circulation, and add weight for unexpected kicks will be on site at all times. Mud program may change due to hole conditions. A closed loop system will be used.

Type	Interval (MD)	lb/gal	Viscosity	Fluid Loss
fresh water spud mud	0' - 450'	8.4 - 9.0	28-34	N/C
brine water*	450' - 8775'	10.0	28-30	N/C
oil based mud	8775' - 19610'	12.8	50-60	<14 HPHT

*Sweep with gel and LCM contingency for losses: 9.0- 9.5 ppg pre-hydrated fresh gel mud system with MMS to control salt leaching.

6. CORES, TESTS, & LOGS

No core, drill stem test, or log is planned.

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈6930 psig. Expected bottom hole temperature is ≈158° F.

H2S monitoring and detection equipment will be used from surface casing point to TD.

8. OTHER INFORMATION

Anticipated spud date is upon approval. It is expected it will take ≈4 months to drill and complete the well.

Additional wells are planned on this pad. This well may be drilled with a walking rig. If that event occurs, then batch drilling of hole intervals will be performed. Idle well control will be ensured by not walking off a well until after the casing has been cemented, wellhead slips set, and a capping flanged nipped up.

In the event a walking rig is used, a variance is requested to use a flexible choke line with flanged ends between the BOP and choke manifold. The line will be kept as straight as possible with minimal turns. Actual specifications and certification will be provided via Sundry Notice if this option is exercised.

Gladiator Fed Com 3502 B 1H Cementing Variance Request

If drilling conditions dictate, Operator requests permission to set 9.625" (intermediate) casing shallower, but no less than 6250' MD/TVD. Cement volumes will be adjusted with the same excess as below to circulate on 2 strings and tie back 500' on the production string.

APD ID: 10400038584 **Submission Date:** 01/29/2019

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes
Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Gladiator_3502B_1H_Road_Map_20190129163855.pdf

Existing Road Purpose: ACCESS **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Gladiator_3502B_1H_New_Road_Map_20190129163920.pdf

New road type: RESOURCE

Length: 117.82 Feet **Width (ft.):** 30

Max slope (%): 0 **Max grade (%):** 3

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Crowned and ditched

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Grader

Access other construction information:

Access miscellaneous information:

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: Borrow ditches will turn out every 100 yards.

Road Drainage Control Structures (DCS) description: None

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Gladiator_3502B_1H_New_Road_Map_20190129163920.pdf

New road type: RESOURCE

Length: 117.82 Feet **Width (ft.):** 30

Max slope (%): 0 **Max grade (%):** 3

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Crowned and ditched

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Grader

Access other construction information:

Access miscellaneous information:

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: Borrow ditches will turn out every 100 yards.

Road Drainage Control Structures (DCS) description: None

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Gladiator_3502B_1H_Well_Map_20190129164105.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: A 5.449 acre central tank battery (CTB) will be built on the south border of the Gladiator well pad. CTB will be accessed from the well pad. Tank battery will be built in southwest corner of the CTB. Flare will be in the southeast corner of the CTB. Process equipment will be north of the flare. Oil will be trucked to market. No gas line contract has been signed.

Production Facilities map:

Gladiator_3502B_1H_Production_Facilities_20190129164133.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Water source type: GW WELL

Water source use type: SURFACE CASING
STIMULATION
DUST CONTROL
INTERMEDIATE/PRODUCTION CASING

Source latitude: **Source longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT

Water source transport method: TRUCKING

Source land ownership: PRIVATE

Source transportation land ownership: PRIVATE

Water source volume (barrels): 21000 **Source volume (acre-feet):** 2.706755

Source volume (gal): 882000

Water source and transportation map:

Gladiator_3502B_1H_Water_Source_Map_20190129164228.pdf

Water source comments: Water will be trucked from 275' deep water well C 03607 POD 1 on private land in NENE 24-21s-27e.

New water well? NO

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: NM One Call (811) will be notified before construction starts. Top 6" of soil and brush will be stockpiled west of the pad. V-door will face east. Closed loop drilling system will be used. Caliche will be hauled from existing caliche pit on private (McDonald) land in SESE 16-23s-28e.

Construction Materials source location attachment:

Gladiator_3502B_1H_Construction_Methods_20190129164302.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: drill cuttings, mud, salts, and other chemicals, human waste

Amount of waste: 1000 barrels

Waste disposal frequency : Daily

Safe containment description: Steel tanks on pad; chemical toileets

Safe containmant attachment:

Waste disposal type: OTHER **Disposal location ownership:** OTHER

Disposal type description: Commercial/Public

Disposal location description: All trash will be placed in a portable trash cage. It will be hauled to the Eddy County landfill. There will be no trash burning. Contents (drill cuttings, mud, salts, and other chemicals) of the mud tanks will be hauled to R360's state approved (NM-01-0006) disposal site at Halfway. Human waste will be disposed of in chemical toilets and hauled to the Artesia wastewater treatment plant.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Description of cuttings location Steel tanks on pad

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Gladiator_3502B_1H_Well_Site_Layout_20190129164539.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: GLADIATOR FED COM 3502 W

Multiple Well Pad Number: 1H

Recontouring attachment:

Gladiator_3502B_1H_Interim_Reclamation_Diagram_20190129164617.pdf

Gladiator_3502B_1H_Recontour_Plat_20190129164628.pdf

Drainage/Erosion control construction: Crowned and ditched

Drainage/Erosion control reclamation: Harrowed on the contour

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Well pad proposed disturbance (acres): 4.62
Road proposed disturbance (acres): 0.08
Powerline proposed disturbance (acres): 0
Pipeline proposed disturbance (acres): 0
Other proposed disturbance (acres): 5.45
Total proposed disturbance: 10.15

Well pad interim reclamation (acres): 0.82
Road interim reclamation (acres): 0
Powerline interim reclamation (acres): 0
Pipeline interim reclamation (acres): 0
Other interim reclamation (acres): 0
Total interim reclamation: 0.82

Well pad long term disturbance (acres): 3.8
Road long term disturbance (acres): 0.08
Powerline long term disturbance (acres): 0
Pipeline long term disturbance (acres): 0
Other long term disturbance (acres): 5.45
Total long term disturbance: 9.33

Disturbance Comments:

Reconstruction method: Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the well pad 0.82 acre by removing caliche and reclaiming 100' on the east side of the pad. This will leave 3.80 acres for the anchors, pump jacks, and tractor-trailer turn around. Disturbed areas will be contoured to match pre-construction grades. Once the wells are plugged, then reclamation will be completed within 6 months of plugging the last well. Reclamation will consist of removing caliche and deeply ripping on the contour. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with BLM's requirements. Noxious weeds will be controlled.
Topsoil redistribution: Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with BLM's requirements.
Soil treatment: None

Existing Vegetation at the well pad:

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road:

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline:

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances:

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name:

Last Name:

Phone:

Email:

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: To BLM standards

Weed treatment plan attachment:

Monitoring plan description: To BLM standards

Monitoring plan attachment:

Success standards: To BLM satisfaction

Pit closure description: No pit

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: OTHER

Describe: CTB

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other Information

Right of Way needed? NO **Use APD as ROW?**

ROW Type(s):

ROW Applications

SUPO Additional Information:

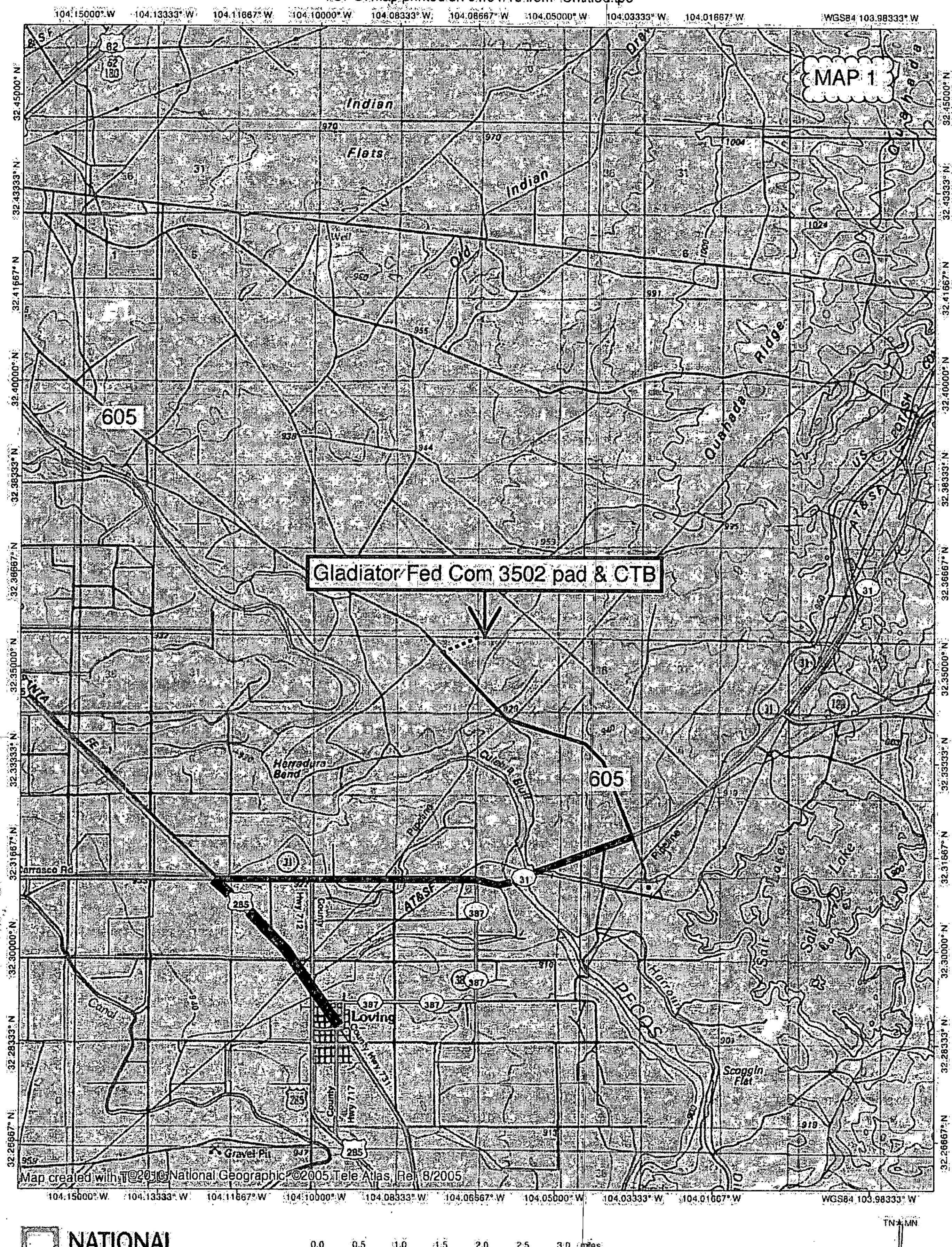
Use a previously conducted onsite? YES

Previous Onsite information: On-site inspection was held on December 6, 2018 with Matt Wirth (BLM). Lone Mountain has inspected the project area and will file an archaeology report.

Other SUPO Attachment

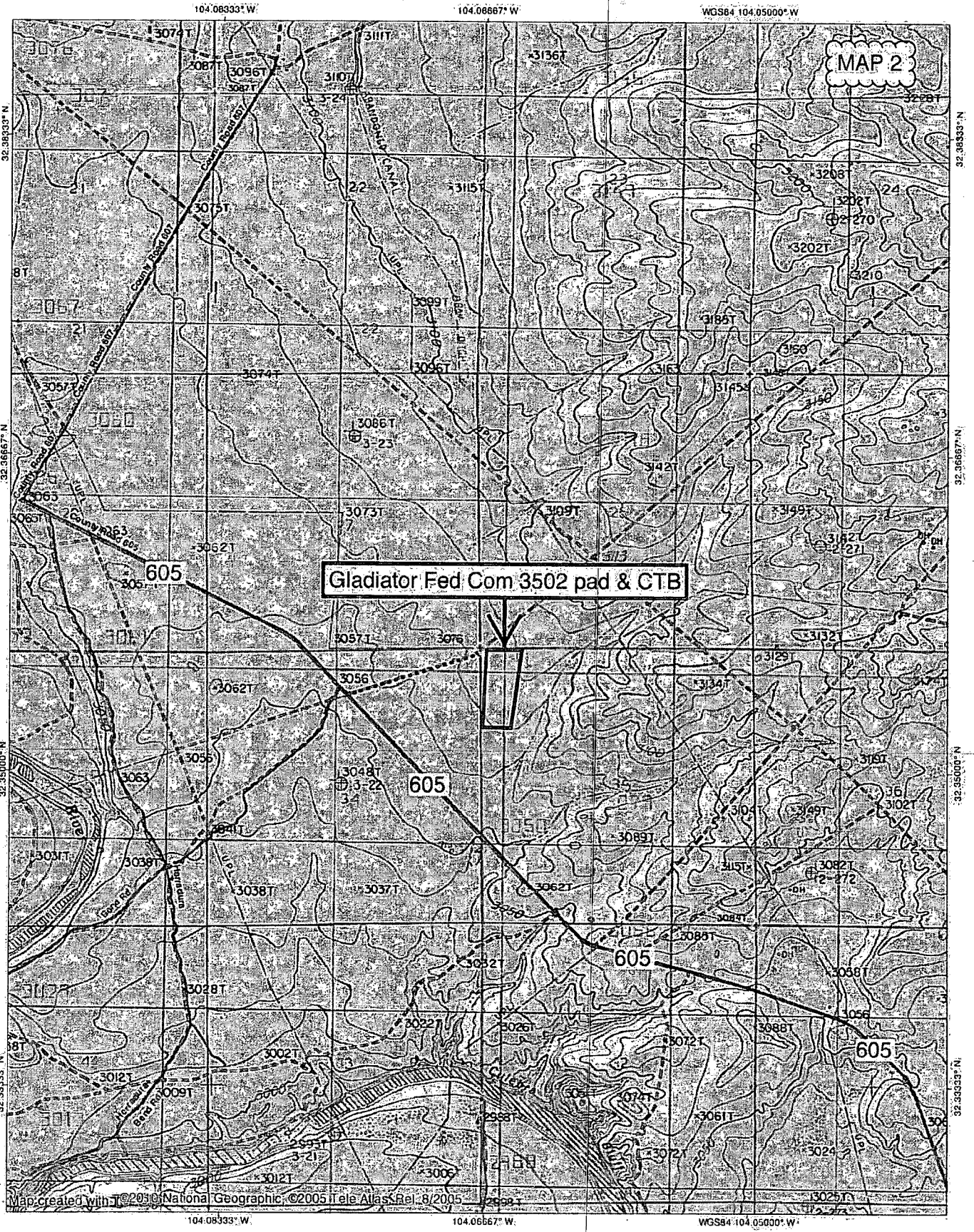
Gladiator_3502B_1H_SUPO_20190129165049.pdf

TOPO! map printed on 01/01/19 from "Untitled.tpo"



NATIONAL GEOGRAPHIC

TOPO! map printed on 01/01/19 from "Untitled.tpo"



NATIONAL GEOGRAPHIC

MILES 0 5 1

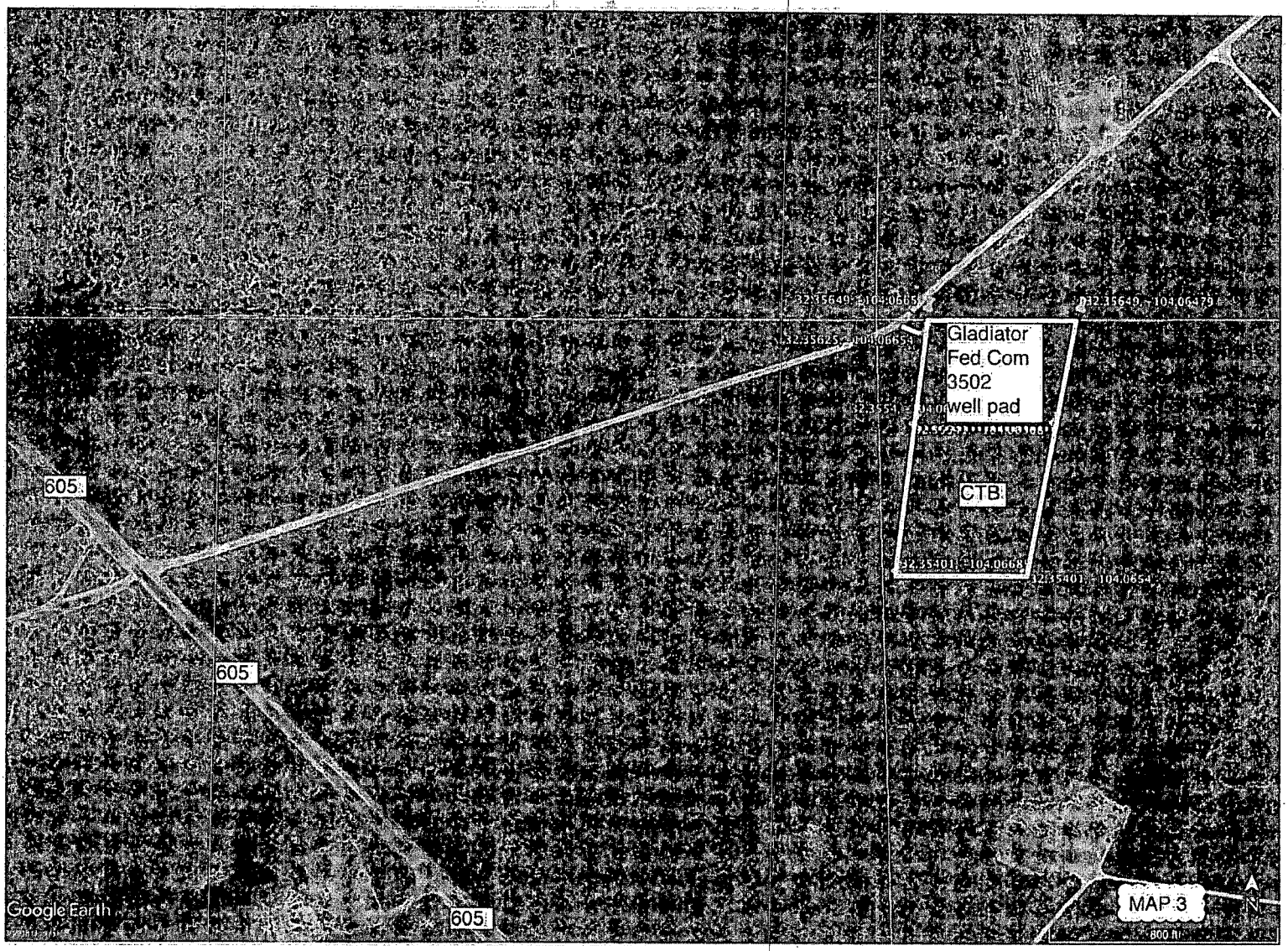
FEET 1000 0 1000 2000 3000 4000 5000

KILOMETERS 1 5 0 1

METERS 1000 0 1000

TN 7° MN

01/01/19


Gladiator
Fed Com
3502
well pad
CTB
605
605
605
Google Earth
MAP 3
800 ft

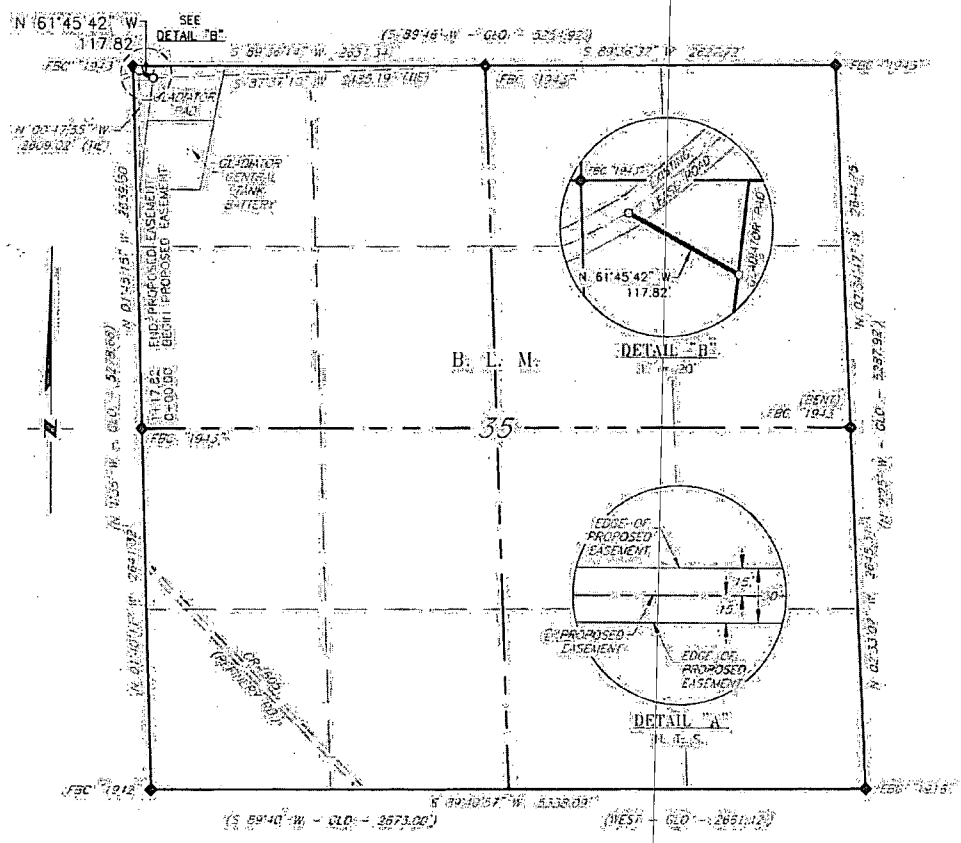
RIDGE RUNNER RESOURCES OPERATING, LLC.

PROPOSED ACCESS EASEMENT FOR THE GLADIATOR FED COM 3502 WELL LOCATIONS

SECTION 35, T22S, R28E

N. M. P. M., EDDY COUNTY, NEW MEXICO

MAP 4



DESCRIPTION

A strip of land 30 feet wide, being 117.82 feet or 7.141 rods in length, lying in Section 35, Township 22 South, Range 28 East, N. M. P. M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the following described survey of the reference line shown across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Northwest quarter of Section 35, which bears, S 87°37'10" W, 2,485.19 feet from a brass cap, stamped "1943", found for the North quarter corner of Section 35;

Thence, N 61°45'42" W, 117.82 feet, to Engr. Sta. 1+17.82, the End of Survey, a point in the Northwest quarter of Section 35, which bears, N 00°47'55" W, 2,609.02 feet from a brass cap, stamped "1943", found for the West quarter corner of Section 35.

Said strip of land contains 0.081 acres, more or less, and is allocated by forties as follows:

NW 1/4 NW 1/4	7.141 Rods	0.081 Acres

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND
( ) RECORD DATA - GLO
FOUND MONUMENT AS NOTED
PROPOSED EASEMENT REFERENCE LINE

I, Jeffrey L. Fansler, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Jeffrey L. Fansler NM PS 10034

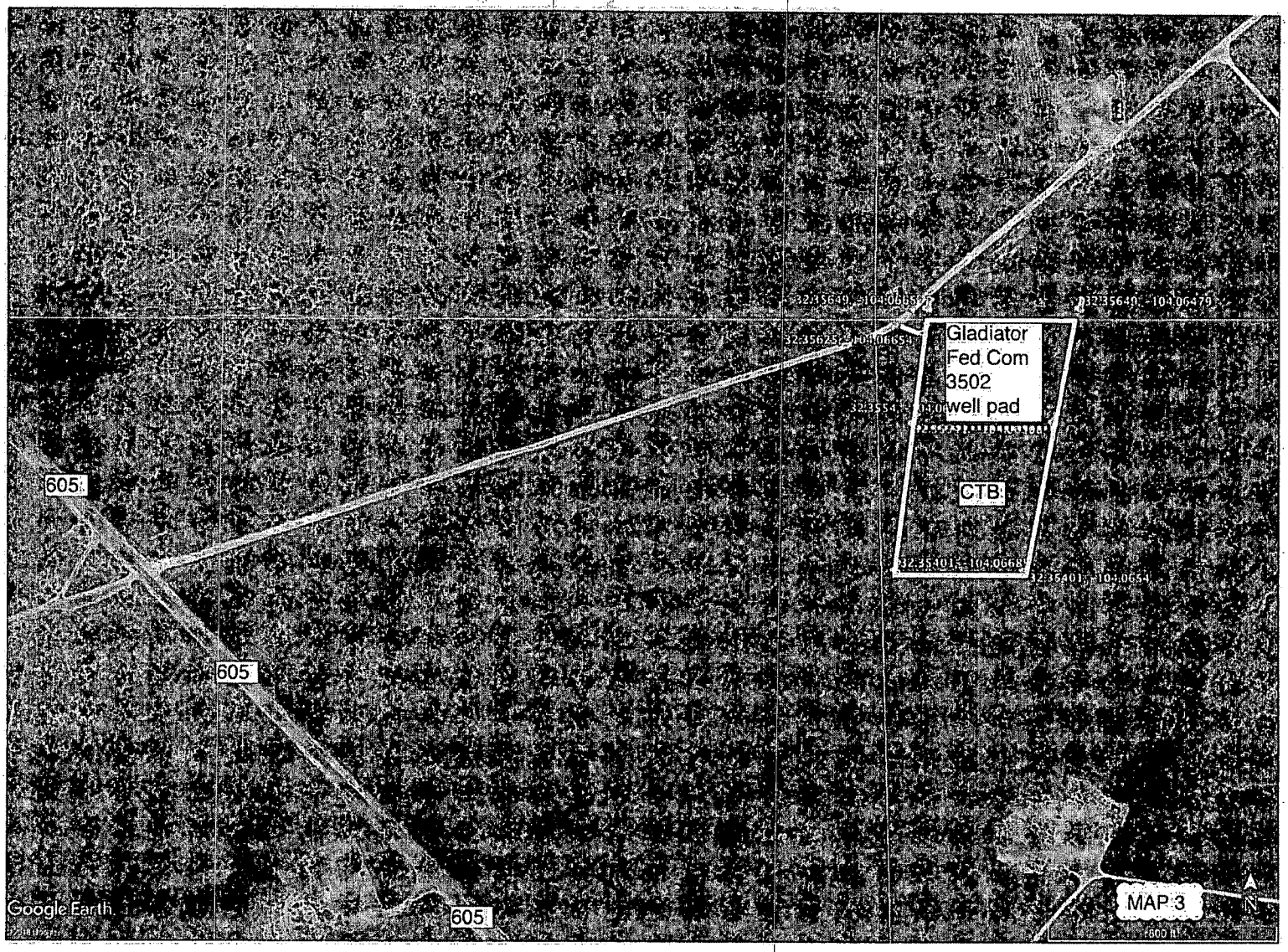
JEFFREY L. FANSLER NEW MEXICO 10034 1/4/19 PROFESSIONAL SURVEYOR

DATE: 12-11-2018		
NO:	REVISION	DATE
1	ESMT. WIDTH	1.7.19
2		
3		
4		

RRC SURVEYING, LLC

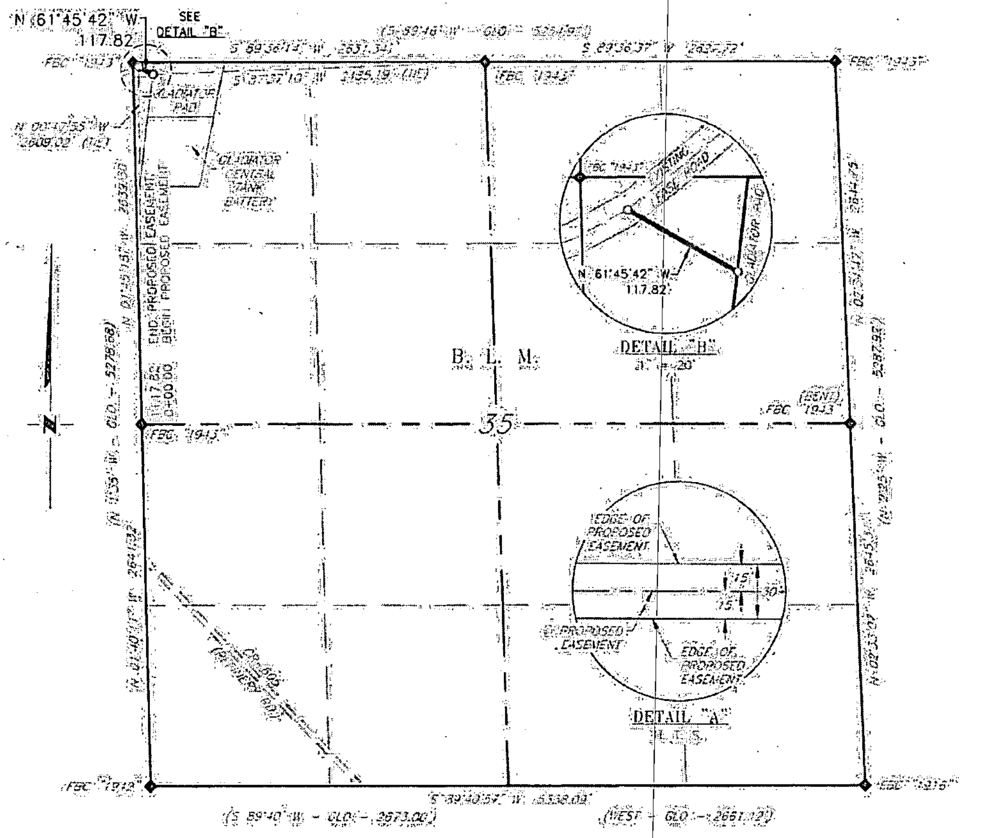
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'	
SURVEYED BY: AB/RU	
DRAWN BY: AAC	
APPROVED BY: JLF	
JOB NO.: LS181211309	
SHEET: GLADIATOR ESMT.	


Gladiator
Fed Com
3502
well pad
CTB
605
605
605
Google Earth
MAP 3
N

RIDGE RUNNER RESOURCES OPERATING, LLC.
PROPOSED ACCESS EASEMENT FOR THE GLADIATOR FED COM 3502 WELL LOCATIONS
SECTION 35, T22S, R28E
N. M. P. M., EDDY COUNTY, NEW MEXICO

MAP 4



DESCRIPTION

A strip of land 30 feet wide, being 117.82 feet or 7.141 rods in length, lying in Section 35, Township 22 South, Range 28 East, N. M. P. M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the following described survey of the reference line shown across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Northwest quarter of Section 35, which bears, S 87°37'10" W, 2,485.19 feet from a brass cap, stamped "1943", found for the North quarter corner of Section 35;

Thence, N 61°45'42" W, 117.82 feet, to Engr. Sta. 1+17.82, the End of Survey, a point in the Northwest quarter of Section 35, which bears, N 00°47'55" W, 2,609.02 feet from a brass cap, stamped "1943", found for the West quarter corner of Section 35.

Said strip of land contains 0.081 acres, more or less, and is allocated by forties as follows:

NW 1/4 NW 1/4	7.141 Rods	0.081 Acres

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND
( ) RECORD DATA — GLO
FOUND MONUMENT AS NOTED
PROPOSED EASEMENT REFERENCE LINE

I, Jeffrey L. Fansler, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

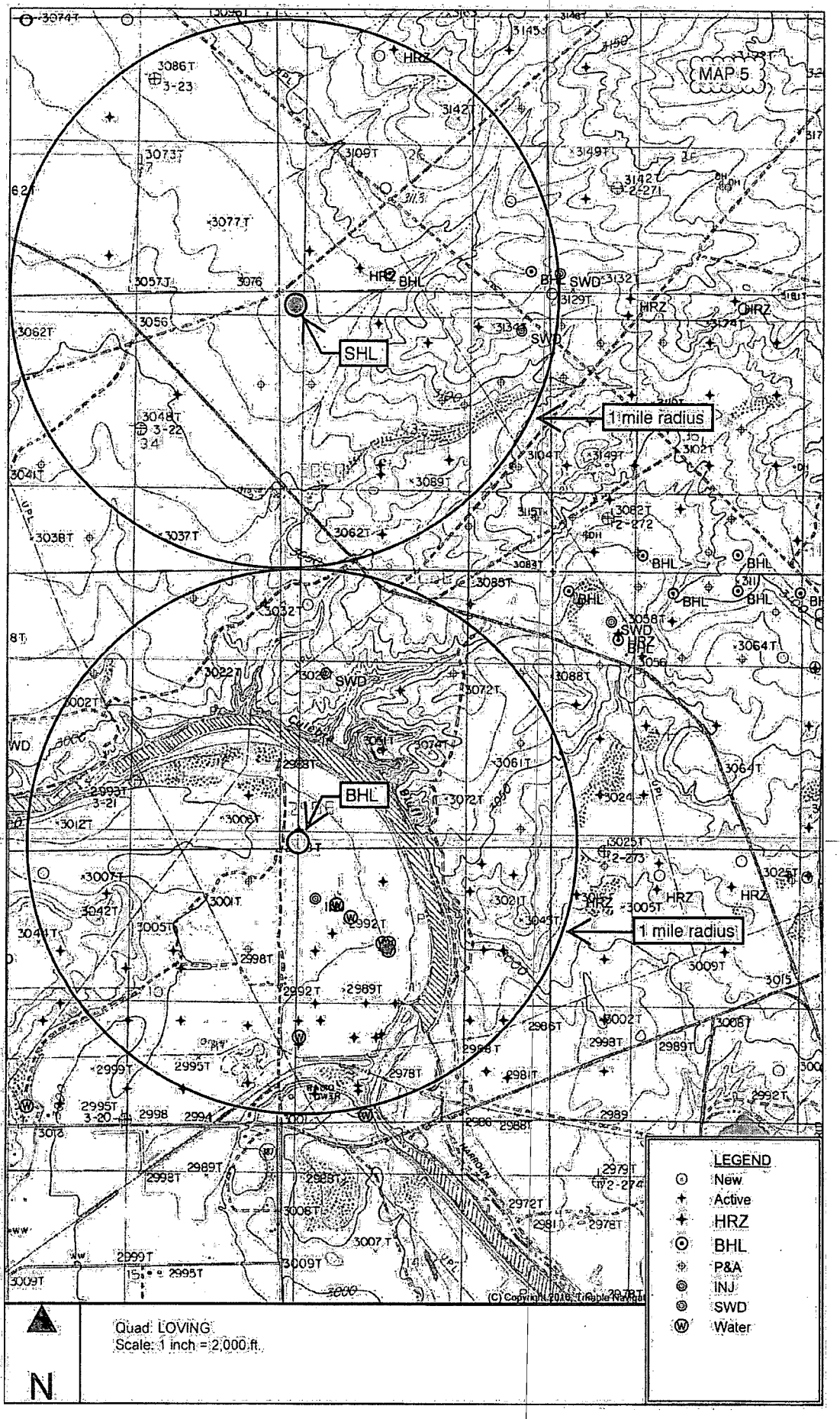
Jeffrey L. Fansler NM PS 10034

JEFFREY L. FANSLER NEW MEXICO 10034 1/4/18 PROFESSIONAL SURVEYOR

DATE: 12-11-2018		
NO.	REVISION	DATE
1	ESMT. WIDTH	1.7.19
2		
3		
4		

RRC SURVEYING, LLC
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
SURVEYED BY: AB/RU
DRAWN BY: AAC
APPROVED BY: JLF
JOB NO.: LS18111309
SHEET: GLADIATOR ESMT


MAP 5
SHL
1 mile radius
BHL
1 mile radius
LEGEND
New
Active
HRZ
BHL
P&A
INJ
SWD
Water
Quad: LOVING
Scale: 1 inch = 2,000 ft.
N

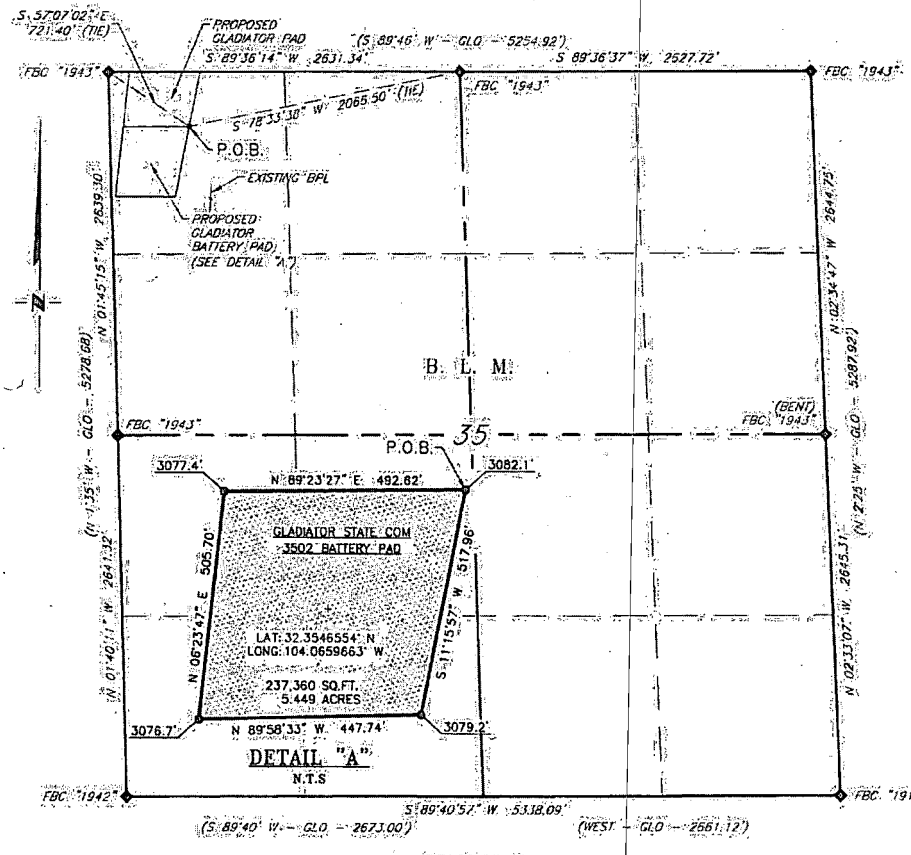
RIDGE RUNNER RESOURCES OPERATING, LLC.

MAP 6

PROPOSED BATTERY PAD FOR THE GLADIATOR STATE COM 3502 WELL LOCATIONS

SECTION 35, T22S, R28E

N. M. P. M., EDDY COUNTY, NEW MEXICO



DESCRIPTION

A tract of land situated within the Northwest quarter of Section 35, Township 22 South, Range 28 East, N. M. P. M., Eddy County, New Mexico, across B. L. M. land and being more particularly described by metes and bounds as follows:

BEGINNING at a point, which bears, S 57°07'02" E, 721.40 feet from a brass cap, stamped "1943", found for the Northwest corner of Section 35, and bears, S 78°33'38" W, 2,066.50 feet from a brass cap, stamped "1943", found for the North quarter corner of Section 35;

Thence S 11°15'57" W, 517.96 feet, to a point;

Thence N 89°58'33" W, 447.74 feet, to a point;

Thence N 06°23'47" E, 505.70 feet, to a point;

Thence N 89°23'27" E, 492.62 feet, to the Point of Beginning.

Said tract of land contains 237,360 square feet or 5.449 acres, more or less, and is allocated by forties as:

NW 1/4 NW 1/4	237,360 Sq. Ft.	5.449 Acres

SCALE: 1" = 1000'

0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST.
DISTANCES ARE HORIZ. GROUND.

LEGEND

( ): RECORD DATA - GLO

◆ : FOUND MONUMENT AS NOTED

P.O.B. : POINT OF BEGINNING

I, Jeffrey L. Fansler, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey, and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Jeffrey L. Fansler NM PS 10034

JEFFREY L. FANSLER — NEW MEXICO — 10034 — 12/13/18 — PROFESSIONAL SURVEYOR

DATE: 12-11-2018		
NO.	REVISION	DATE
1		
2		
3		
4		

RRC SURVEYING, LLC

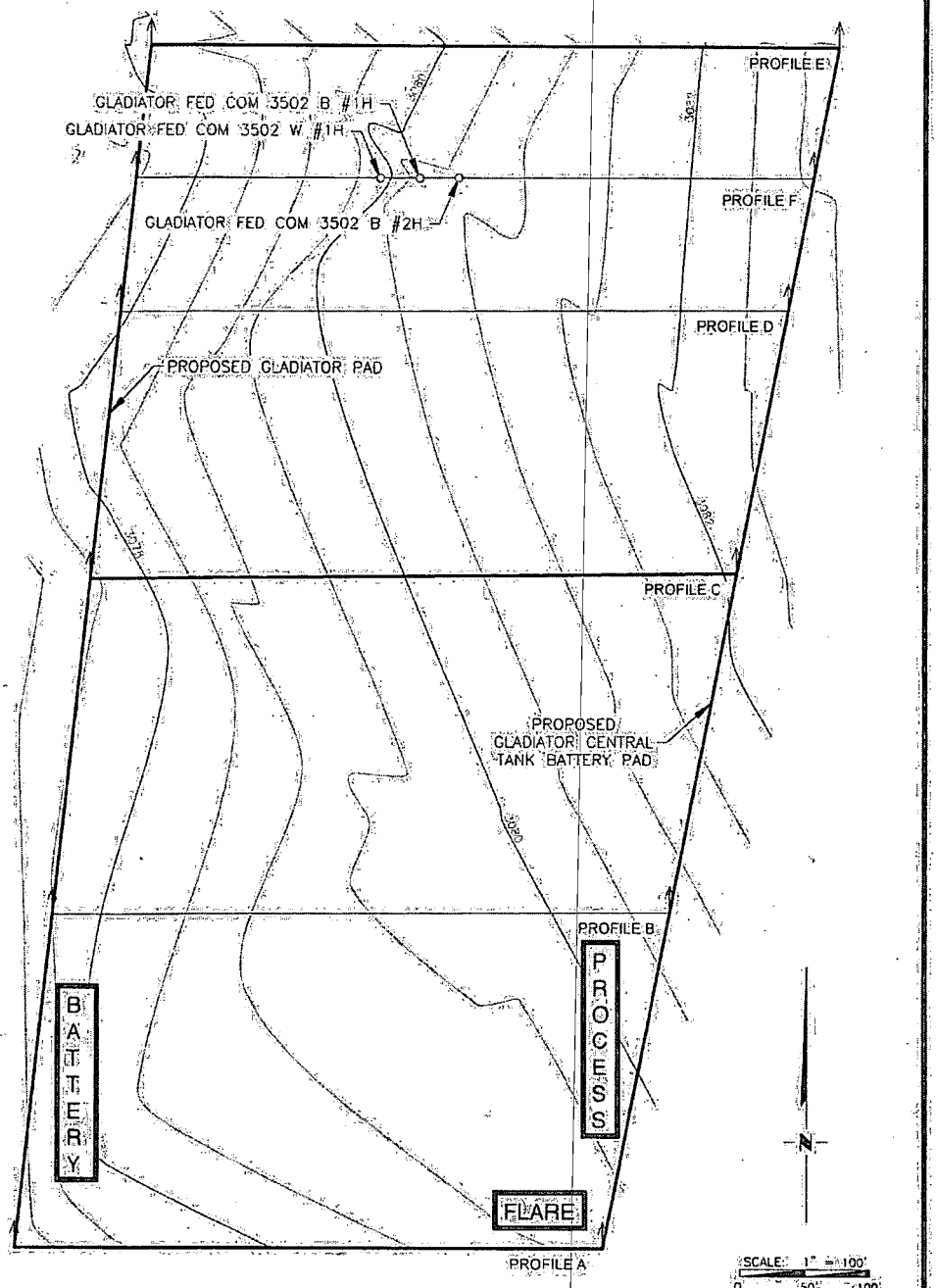
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'	
SURVEYED BY: AB/RU	
DRAWN BY: CAR	
APPROVED BY: JLF	
JOB NO.: LS181111309	
SHEET: BAT	

RIDGE RUNNER RESOURCES OPERATING, LLC.

MAP 7

GLADIATOR FED COM 3502 PAD & BATTERY
CONTOUR LINES
SECTION 35, T22S, R28E
N. M. P. M., EDDY COUNTY, NEW MEXICO



BEARINGS ARE GRID, NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

DATE: 12-11-2018		
NO.	REVISION	DATE
1	WELLS NAME	1.2.19
2	MOVE SL/NEW WELL	1.21.19
3		
4		

RRC SURVEYING, LLC

701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'	
SURVEYED BY: AB/RU	
DRAWN BY: AAC	
APPROVED BY: JLF	
JOB NO.: LS18111309	
SHEET: PAD&BATT CTR LN	

RIDGE RUNNER RESOURCES OPERATING, LLC.

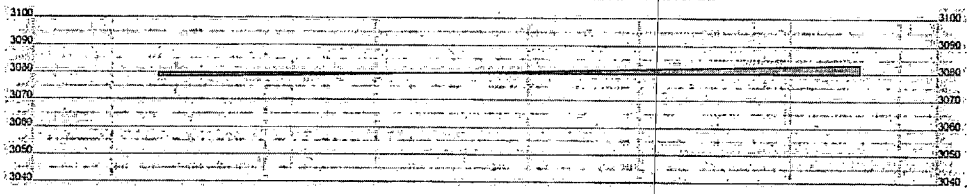
MAP 8

GLADIATOR FED COM 3502 PAD & BATTERY

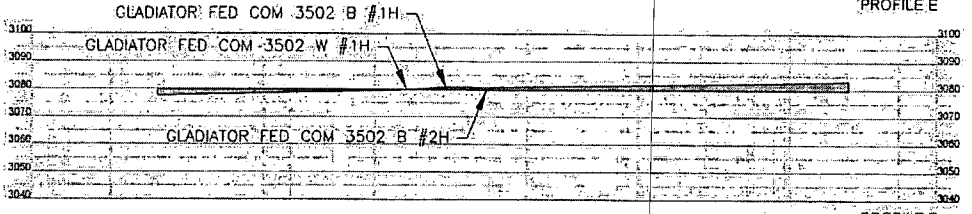
PROFILES

SECTION 35, T22S, R28E

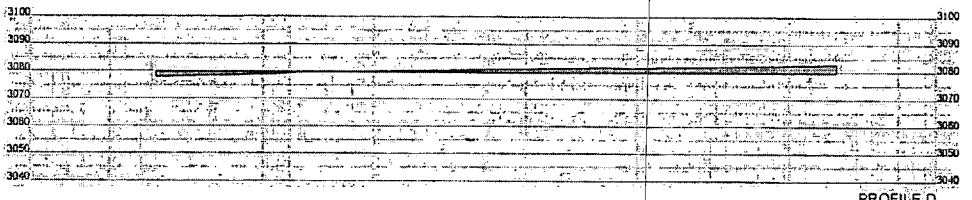
N. M. P. M., EDDY COUNTY, NEW MEXICO



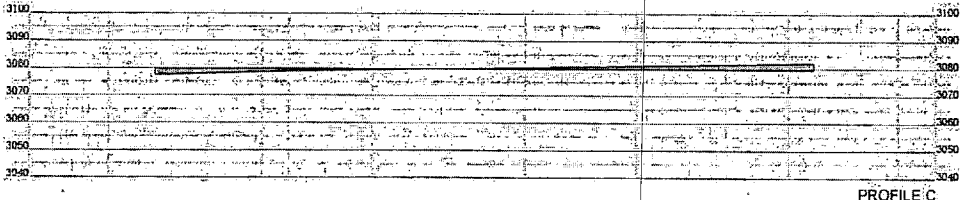
PROFILE E



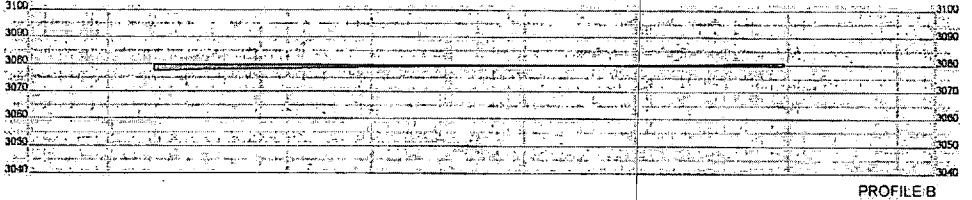
PROFILE F



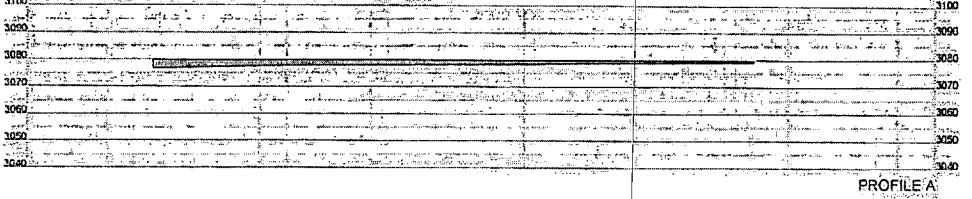
PROFILE D



PROFILE C



PROFILE B



PROFILE A

SCALE: 1" = 100'
0 50' 100'

SCALE
Horizontal: 1" = 100'
Vertical: 1" = 50'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND

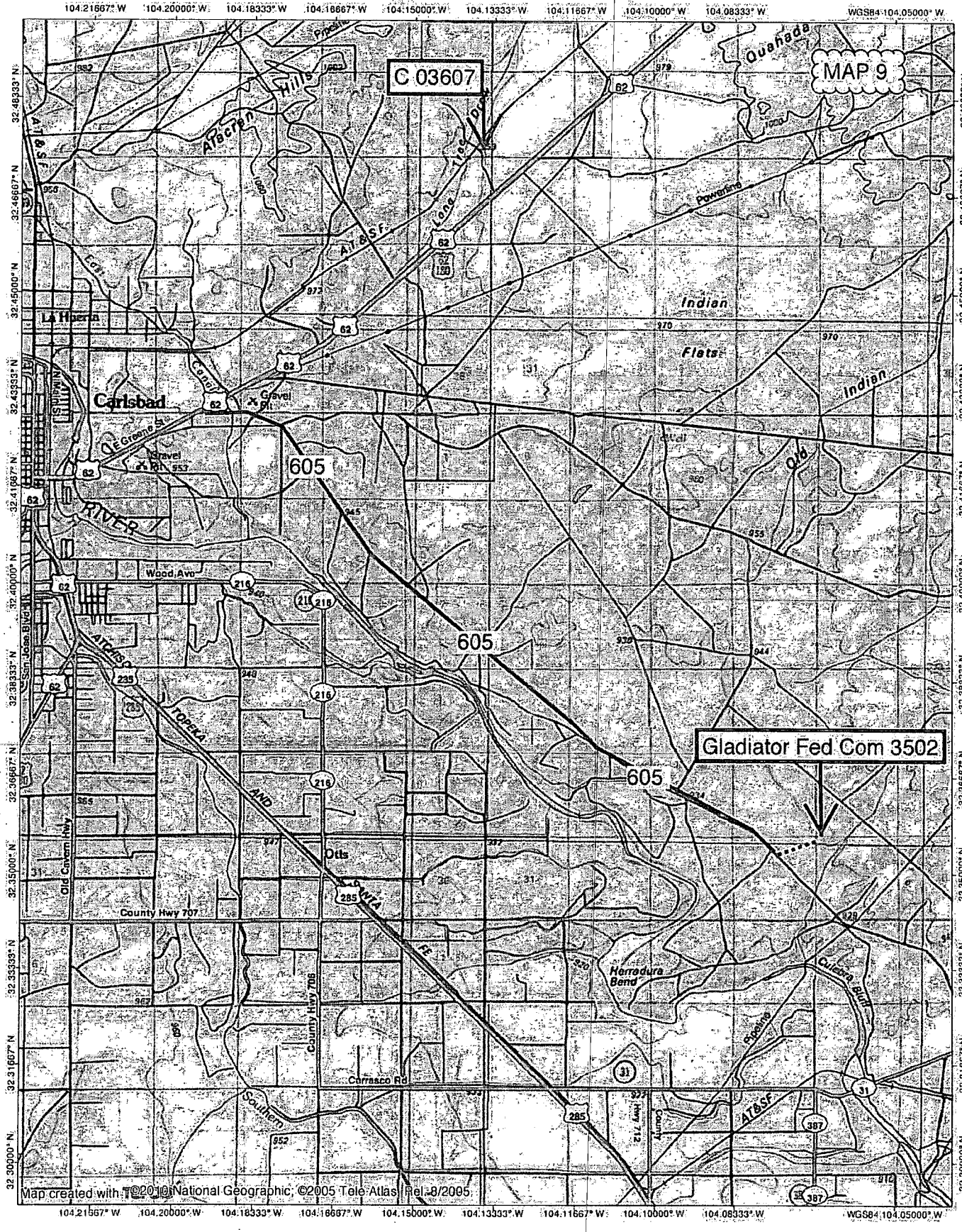
DATE: 12-11-2018		
NO.	REVISION	DATE
1	WELLS NAME	1.2.19
2	MOVE SL/NEW WELL	1.21.19
3		
4		

RRC SURVEYING, LLC

701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
SURVEYED BY: AB/RU
DRAWN BY: AAC
APPROVED BY: JLF
JOB NO.: LS18111309
SHEET: PAD&BATT. PROFILES

TOPO! map printed on 01/01/19 from "Untitled.tpo"



NATIONAL GEOGRAPHIC

0.0 0.5 1.0 1.5 2.0 2.5 3.0 miles
0 1 2 3 4 5 km

TN + MN
7°
01/01/19

RIDGE RUNNER RESOURCES OPERATING, LLC

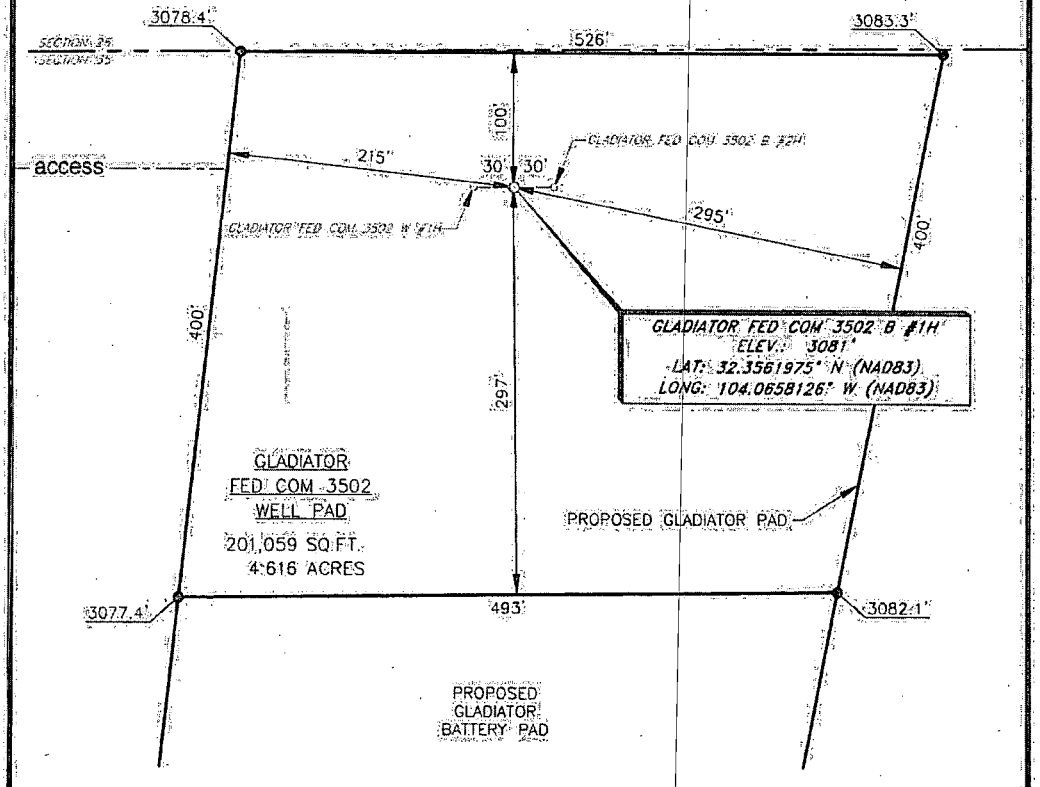
MAP 10

GLADIATOR FED COM 3502 B #1H

(100' FNL & 360' FWL)

SECTION 35, T22S, R28E

N. M. P. M., EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of State Highway 31 (Potash Mines Rd.) and CR-605 (Refinery Rd.),
Go Northwest on CR-605 aprox. 3.6 miles to lease road on the right;
Turn right and go East aprox. 0.5 miles to proposed road on the right;
Turn right and go East aprox. 250 feet to proposed location.

THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA IS SHOWN FROM A PREVIOUS SURVEY REFERENCED HEREON.

I, Jeffrey L. Fansler, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Jeffrey L. Fansler NM PS: 10034

JEFFREY L. FANSLER NEW MEXICO 10034 12/13/18 PROFESSIONAL SURVEYOR

SCALE: 1" = 100'
0 50' 100'

BEARINGS ARE GRID NAD 83 NM EAST.
DISTANCES ARE HORIZ. GROUND.

DATE: 12-11-2018		
NO.	REVISION	DATE
1	WELL NAME+ACR	12.20.18
2	WELL NAME	1.2.19
3	MOVE SL	1.21.19
4		

RRC SURVEYING, LLC

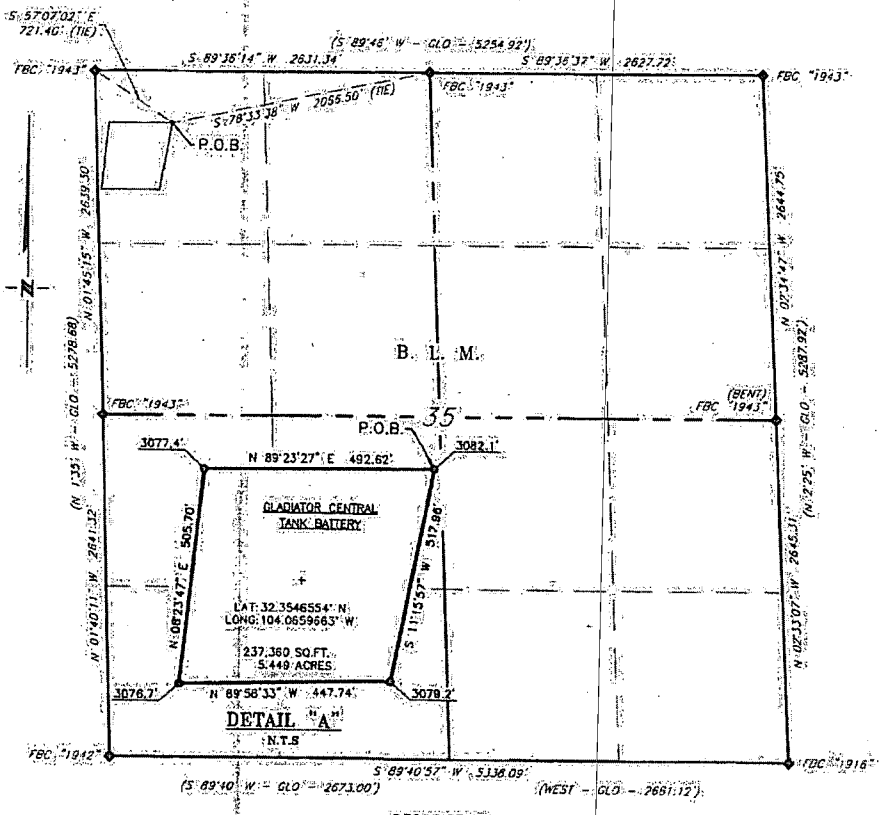
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'	
SURVEYED BY: AB/RU	
DRAWN BY: CAR	
APPROVED BY: JLF	
JOB NO.: LS1811309	
SHEET: B 1H PAD	

RIDGE RUNNER RESOURCES OPERATING, LLC.

MAP 11

SURVEY FOR THE PROPOSED
GLADIATOR CENTRAL TANK BATTERY
SECTION 35, T22S, R28E
N. M. P. M., EDDY COUNTY, NEW MEXICO



DESCRIPTION

A tract of land situated within the Northwest quarter of Section 35, Township 22 South, Range 28 East, N. M. P. M., Eddy County, New Mexico, across B. L. M. land and being more particularly described by metes and bounds as follows:

BEGINNING at a point, which bears, S 57°07'02" E, 721.40 feet from a brass cap, stamped "1943", found for the Northwest corner of Section 35, and bears, S 78°33'38" W, 2,066.50 feet from a brass cap, stamped "1943", found for the North quarter corner of Section 35;

Thence S 11°15'57" W, 517.96 feet, to a point;

Thence N 89°58'33" W, 447.74 feet, to a point;

Thence N 06°23'47" E, 505.70 feet, to a point;

Thence N 89°23'27" E, 492.62 feet, to the Point of Beginning.

Said tract of land contains 237,360 square feet or 5.449 acres, more or less, and is allocated by forties as:

NW 1/4 NW 1/4	237,360 Sq. Ft.	5.449 Acres

SCALE: 1" = 1000'
0 500' 1000'

BEARINGS ARE GRID, NAD 83 NM EAST.
DISTANCES ARE HORIZ. GROUND.

LEGEND:
( ) RECORD DATA - GLO
◇ FOUND MONUMENT AS NOTED
P.O.B. POINT OF BEGINNING

I, Jeffrey L. Fansler, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Jeffrey L. Fansler NM PS 10034

JEFFREY L. FANSLER NEW MEXICO 10034 12/13/18 PROFESSIONAL SURVEYOR

DATE: 12-11-2018		
NO.	REVISION	DATE
1	BATTERY NAME	12.20.18
2	WELLS NAME	1.2.19
3	BATTERY NAME	1.4.19
4		

RRC SURVEYING, LLC

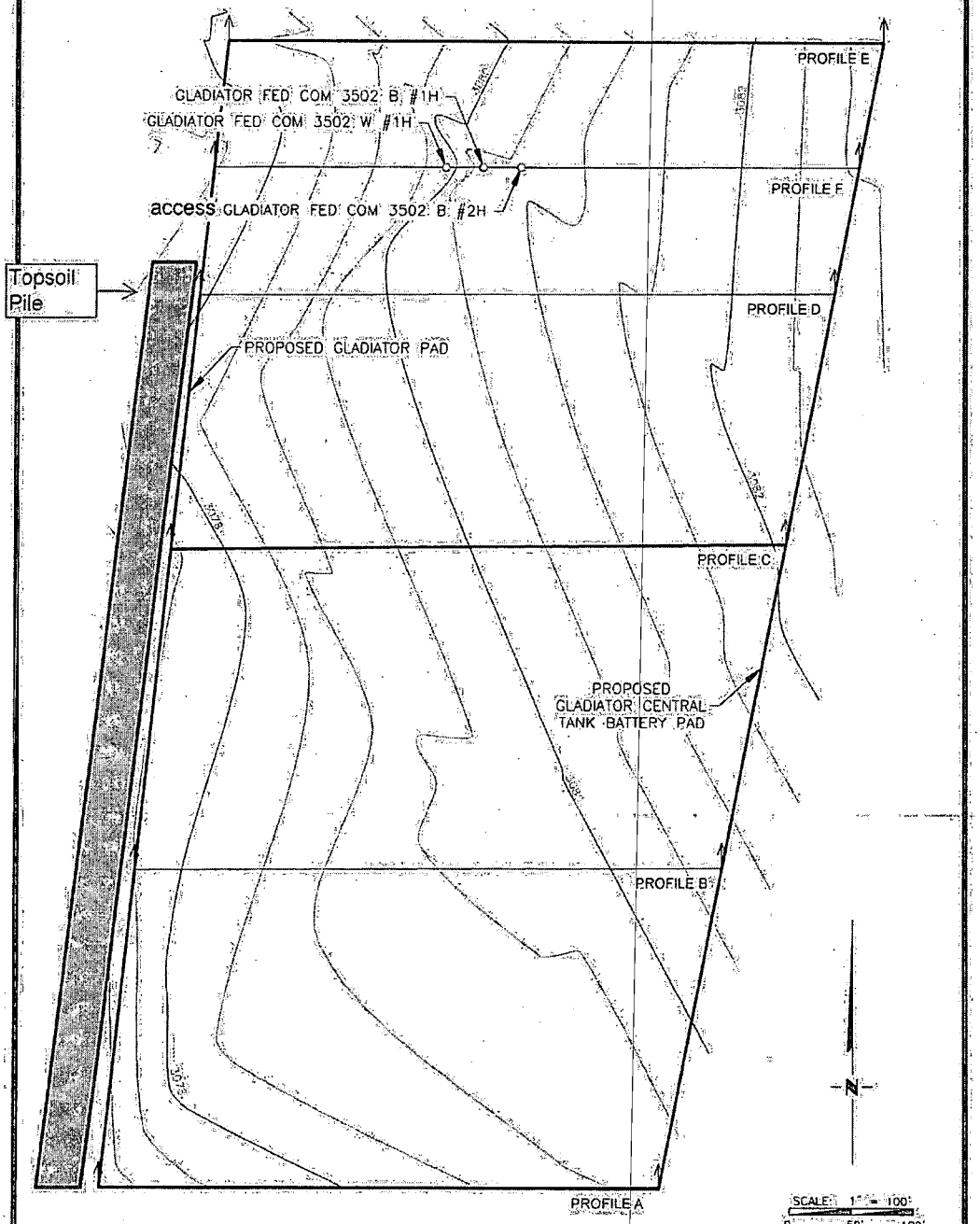
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'	
SURVEYED BY: AB/RU	
DRAWN BY: CAR	
APPROVED BY: JLF	
JOB NO.: LS1811.1309	
SHEET: BAT	

RIDGE RUNNER RESOURCES OPERATING, LLC.

MAP 12

GLADIATOR FED COM 3502 PAD & BATTERY
CONTOUR LINES
SECTION 35, T22S, R28E
N. M. P. M., EDDY COUNTY, NEW MEXICO



DATE: 12-11-2018		
NO.	REVISION	DATE
1	WELLS NAME	12.19
2	MOVE SL/NEW WELL	1.21.19
3		
4		

RRC SURVEYING, LLC

701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'	
SURVEYED BY: AB/RU	
DRAWN BY: AAC	
APPROVED BY: JLF	
JOB NO.: LS181111309	
SHEET: PAD&BATT. CTR. LN	

RIDGE RUNNER RESOURCES OPERATING, LLC.

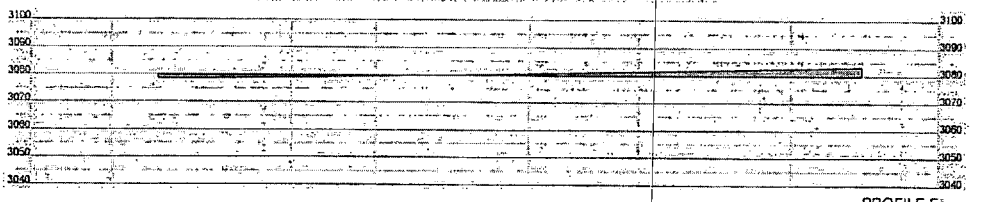
MAP 13

GLADIATOR FED COM 3502 PAD & BATTERY

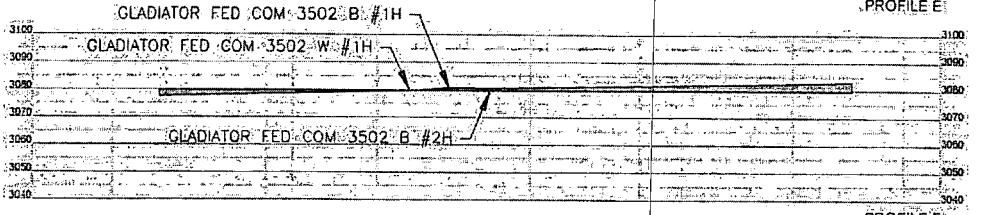
PROFILES

SECTION 35, T22S, R28E

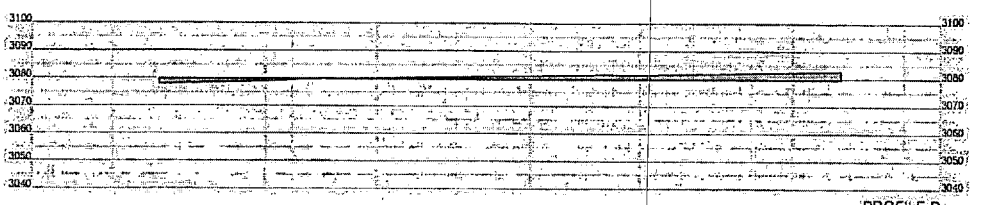
N. M. P. M., EDDY COUNTY, NEW MEXICO



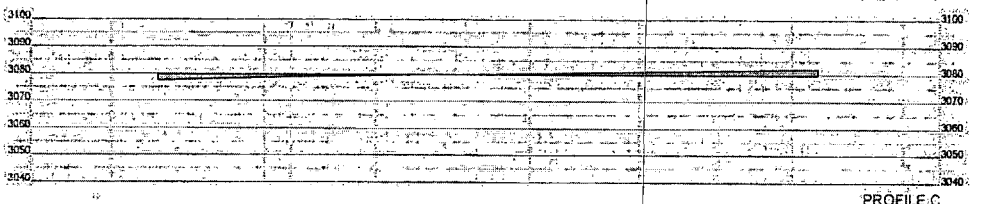
PROFILE E



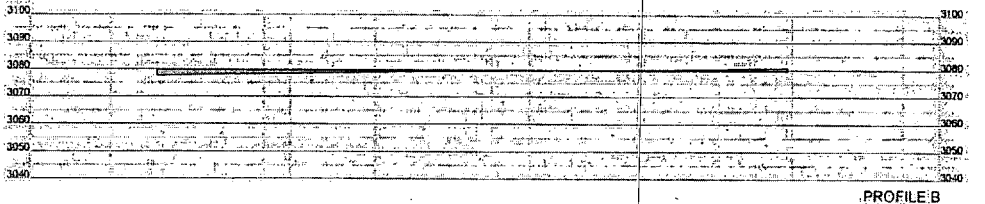
PROFILE F



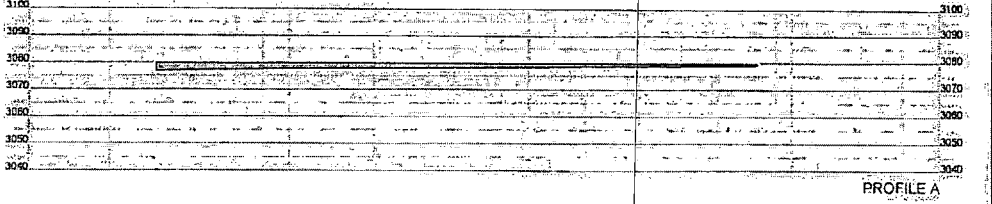
PROFILE D



PROFILE C



PROFILE B



PROFILE A

SCALE: 1" = 100'
0 50' 100'

SCALE:
Horizontal: 1" = 100'
Vertical: 1" = 50'

BEARINGS ARE GRID NAD 83 NM EAST.
DISTANCES ARE HORIZ. GROUND.

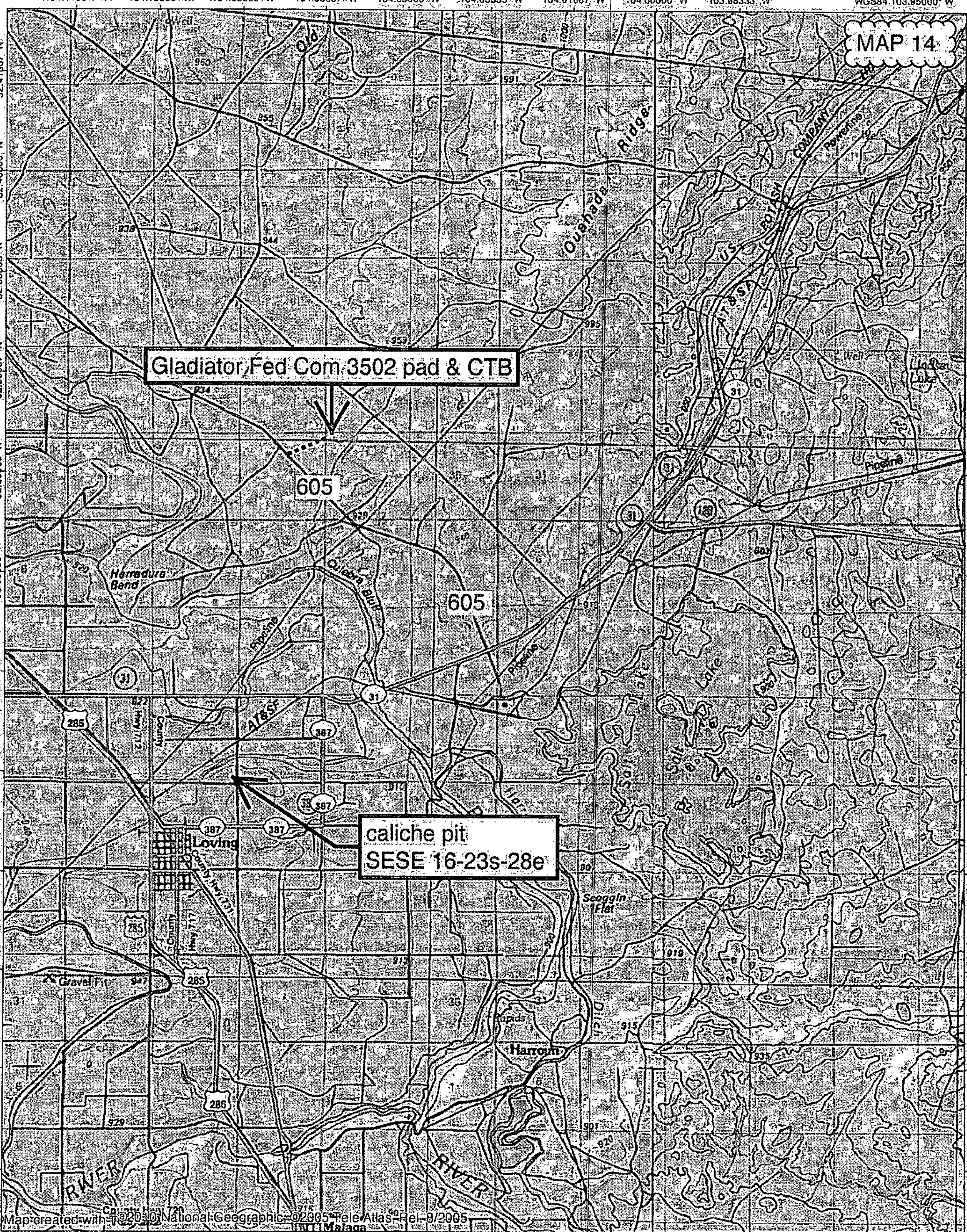
DATE: 12-11-2018		
NO.	REVISION	DATE
1	WELLS NAME	1.2.19
2	MOVE SL/NEW WELL	1.21.19
3		
4		

RRC SURVEYING, LLC

701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE:	1" = 100'
SURVEYED BY:	AB/RU
DRAWN BY:	AAC
APPROVED BY:	JLF
JOB NO.:	LS1811309
SHEET:	PAD&BATT PROFILES

TOPO! map printed on 08/26/18 from "Untitled.tpo"



NATIONAL GEOGRAPHIC

0.0 0.5 1.0 1.5 2.0 2.5 3.0 miles
0 1 2 3 4 5 km

TN MN 7°

08/26/18

RIDGE RUNNER RESOURCES OPERATING, LLC

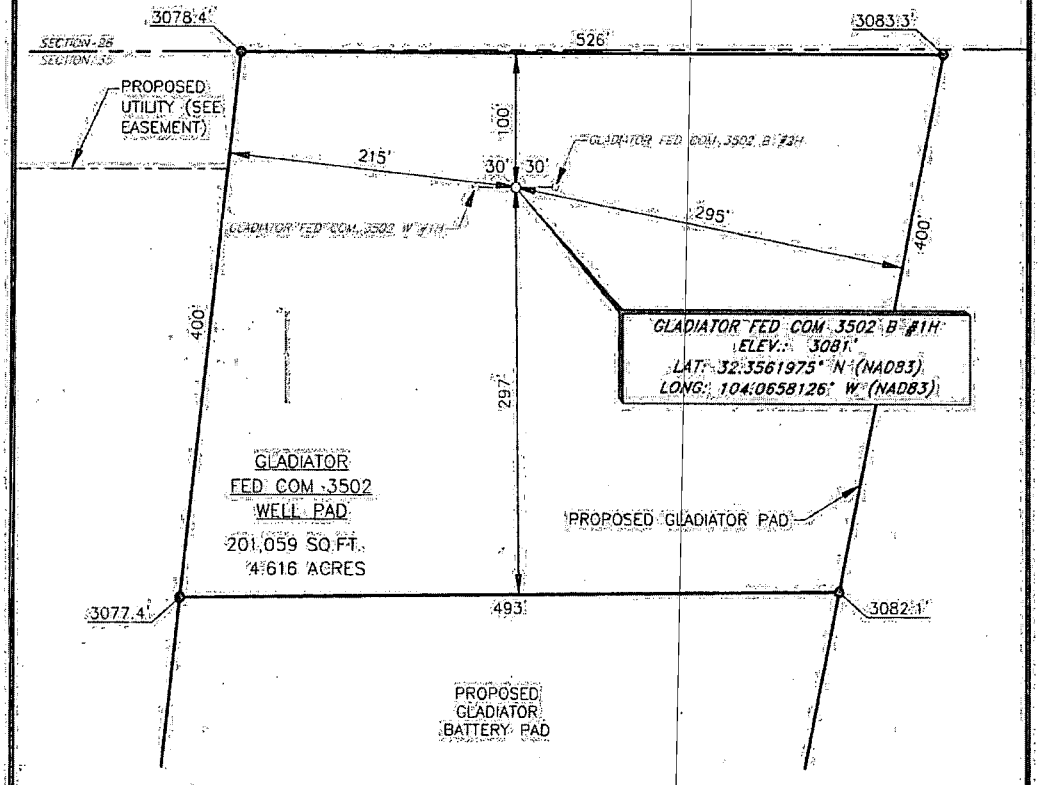
MAP 15

GLADIATOR FED COM 3502 B #1H

(100' FNL & 360' FWL)

SECTION 35, T22S, R28E

N. M. P. M., EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of State Highway 31 (Potash Mines Rd.) and CR-605 (Refinery Rd.),
Go Northwest on CR-605 approx. 3.6 miles to lease road on the right,
Turn right and go East approx. 0.5 miles to proposed road on the right,
Turn right and go East approx. 250 feet to proposed location.

THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA IS SHOWN FROM A PREVIOUS SURVEY REFERENCED HEREON.

I, Jeffrey L. Fansler, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Jeffrey L. Fansler, NM PS/ 10034

JEFFREY L. FANSLER — NEW MEXICO — 10034 — 12/13/18 — PROFESSIONAL SURVEYOR

SCALE: 1" = 100'
0' 50' 100'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND

DATE: 12-11-2018		
NO.	REVISION	DATE
1	WELL NAME+ACR	12.20.18
2	WELL NAME	1.2.19
3	MOVE SL	1.21.19
4		

RRC SURVEYING, LLC

701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
SURVEYED BY: AB/RU
DRAWN BY: CAR
APPROVED BY: JLF
JOB NO.: LS181111309
SHEET: B 1H PAD

RIDGE RUNNER RESOURCES OPERATING, LLC.

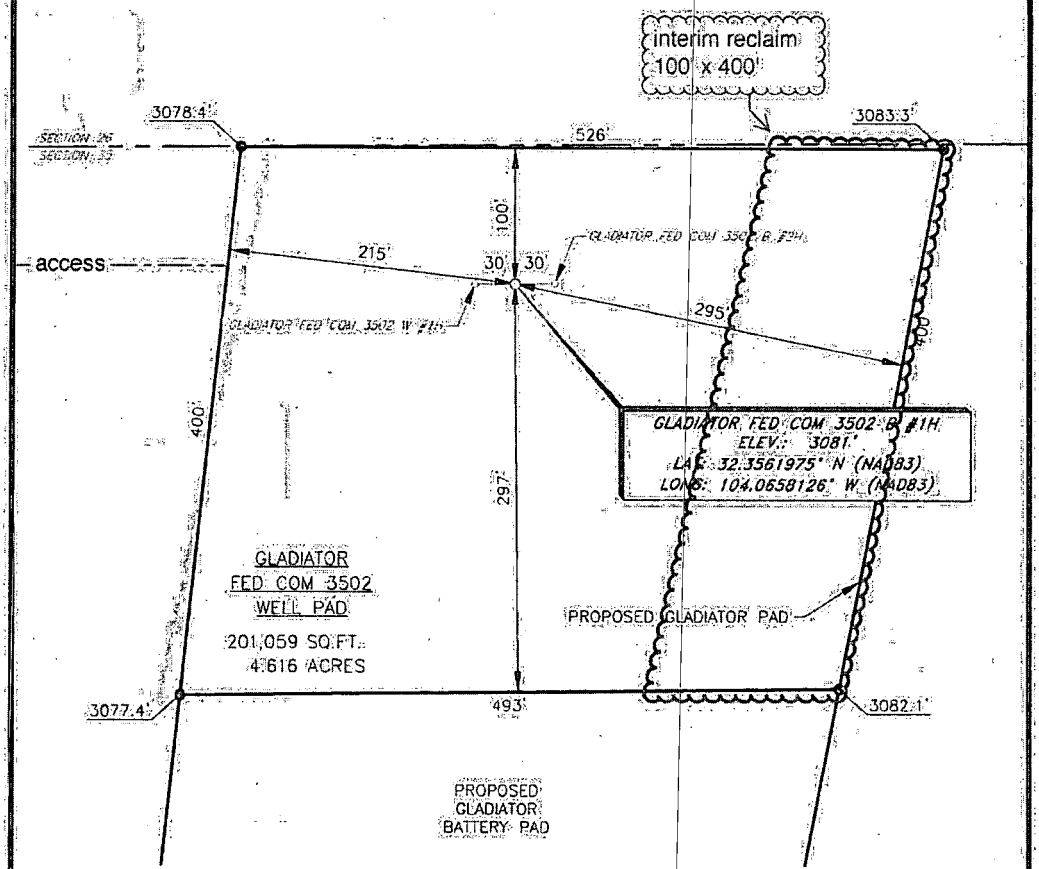
MAP 16

GLADIATOR FED COM 3502 B #1H

(100' FNL & 360' FWL)

SECTION 35, T22S, R28E

N. M. P. M., EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of State Highway 31 (Potash Mines Rd.) and CR-605 (Refinery Rd.),
Go Northwest on CR-605 approx. 3.6 miles to lease road on the right;
Turn right and go East approx. 0.5 miles to proposed road on the right;
Turn right and go East approx. 250 feet to proposed location.

THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA IS SHOWN FROM A PREVIOUS SURVEY REFERENCED HEREON.

I, Jeffrey L. Fansler, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Jeffrey L. Fansler NM PS 10034

JEFFREY L. FANSLER — NEW MEXICO — 10034 — 12/13/18 — PROFESSIONAL SURVEYOR

SCALE: 1" = 100'
0 50' 100'

BEARINGS ARE GRID NAD 83 NM EAST.
DISTANCES ARE HORIZ. GROUND.

NO.	REVISION	DATE
1	WELL NAME+ACR	12.20.18
2	WELL NAME	1.2.19
3	MOVE SL	1.21.19
4		

DATE: 12-11-2018

RRC SURVEYING, LLC

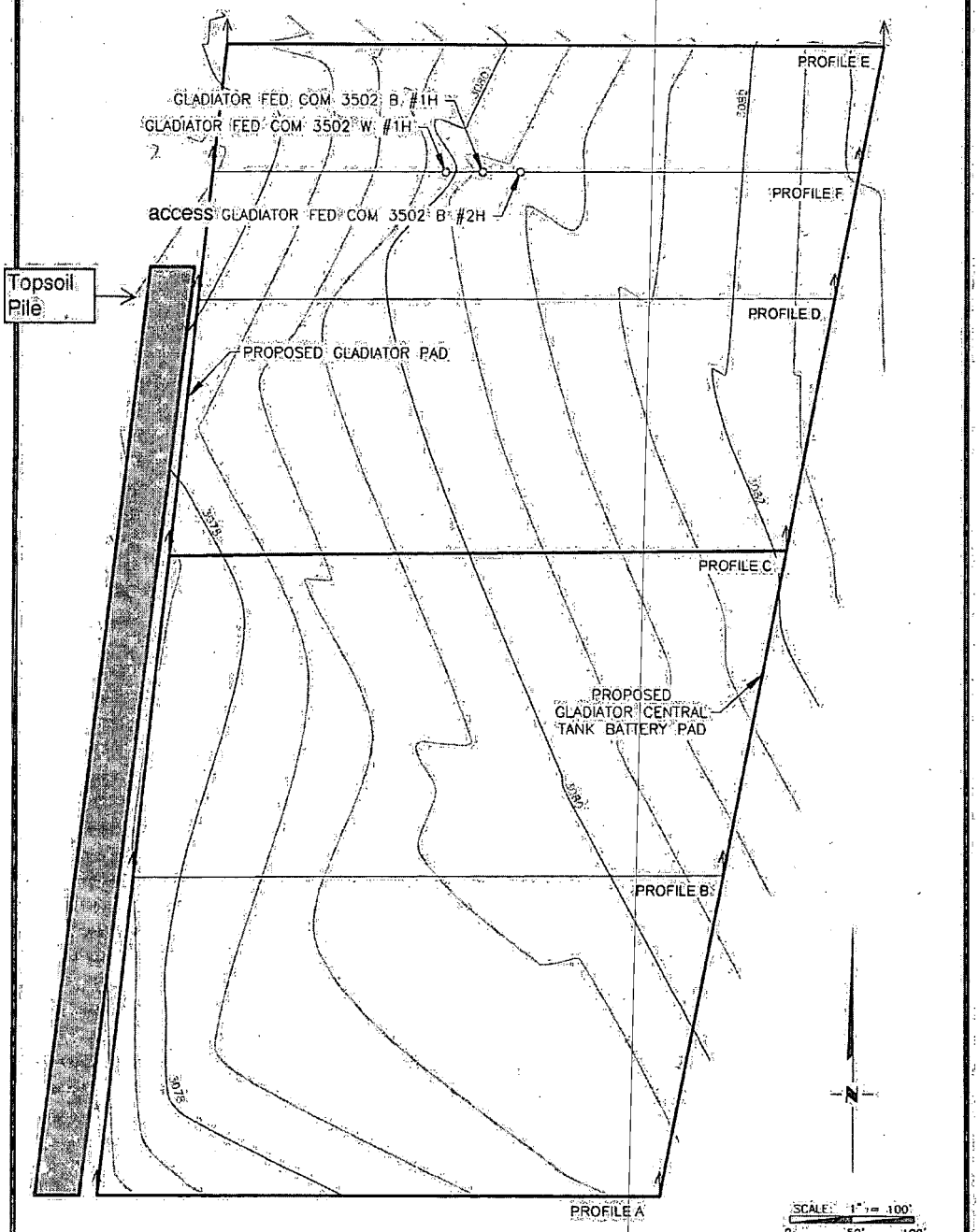
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
SURVEYED BY: AB/RU
DRAWN BY: CAR
APPROVED BY: JLF
JOB NO.: LS18111309
SHEET: B 1H PAD

RIDGE RUNNER RESOURCES OPERATING, LLC.

MAP 17

GLADIATOR FED COM 3502 PAD & BATTERY
CONTOUR LINES
SECTION 35, T22S, R28E
N. M. P. M., EDDY COUNTY, NEW MEXICO



DATE: 12-11-2018

NO.	REVISION	DATE
1	WELLS NAME	1.2.19
2	MOVE SL/NEW WELL	1.21.19
3		
4		

RRC SURVEYING, LLC

701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
SURVEYED BY: AB/RU
DRAWN BY: AAC
APPROVED BY: JLF
JOB NO.: LS181111309
SHEET: PAD&BATT CTR LN

RIDGE RUNNER RESOURCES OPERATING, LLC.

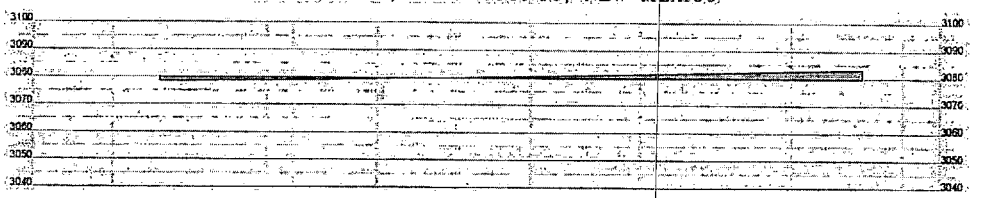
MAP 18

GLADIATOR FED COM 3502 PAD & BATTERY

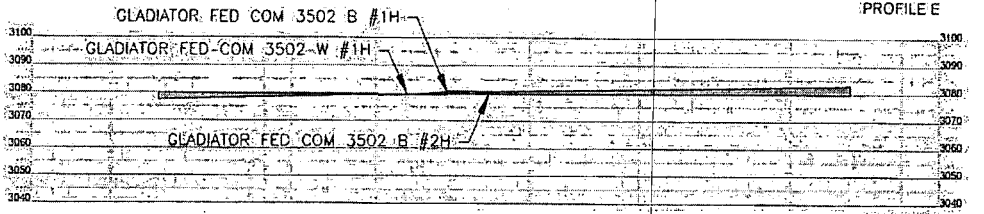
PROFILES

SECTION 35, T22S, R28E

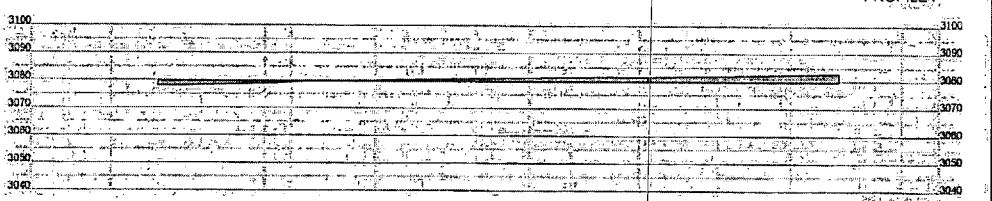
N. M. P. M., EDDY COUNTY, NEW MEXICO



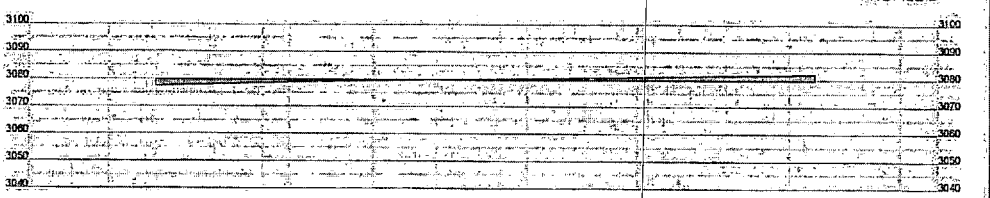
PROFILE E



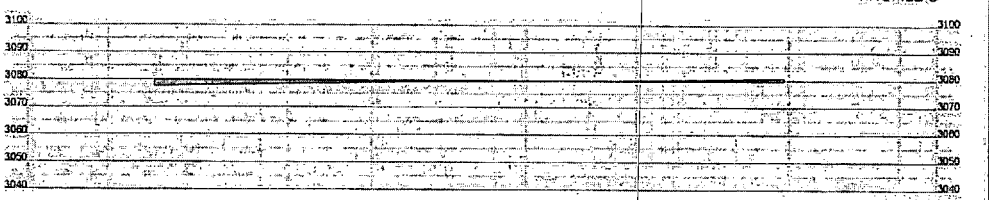
PROFILE F



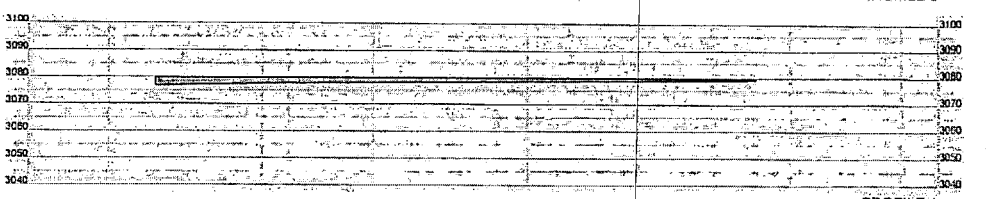
PROFILE D



PROFILE C



PROFILE B



PROFILE A

SCALE: 1" = 100'
0 50' 100'

SCALE:
Horizontal: 1" = 100'
Vertical: 1" = 50'

BEARINGS ARE GRID, NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND

DATE: 12-11-2018		
NO:	REVISION	DATE:
1	WELLS NAME	1.2.19
2	MOVE SL/NEW WELL	1.21.19
3		
4		

RRC SURVEYING, LLC

701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
SURVEYED BY: AB/RU
DRAWN BY: AAC
APPROVED BY: JLF
JOB NO.: LS18111309
SHEET: PAD&BATT PROFILES

Surface Use Plan

1. ROAD DIRECTIONS & DESCRIPTIONS (See MAPS 1 - 4)

From the center of Loving, NM (not Lovington)
Go NW 2.4 miles on paved US 285 to the equivalent of Mile Post 23.4
Then turn right and go East 5.3 miles on paved NM 31
Then turn left and go NW 3.6 miles on paved County Road 605 (Refinery)
Then turn right and go NE 0.5 mile on a caliche oil field road
Then turn right and go E 117.82' cross-country to the proposed Gladiator pad

Non-county roads will be maintained as needed to Gold Book standards. This includes pulling ditches, preserving the crown, and cleaning culverts. This will be done at least once a year, and more often as needed.

2. ROAD TO BE BUILT OR UPGRADED (See MAPS 3 & 4)

The 117.82' of new resource road will be crowned and ditched, have a 14' wide driving surface, and be surfaced with caliche. No cattle guard, gate, culvert, or vehicle turnout is needed. Borrow ditches will turn out every ≈100 yards. Maximum disturbed width = 30'. Maximum grade = 3%. Maximum cut or fill = 3'.

3. EXISTING WELLS (See MAP 5)

Existing oil, gas, disposal, water, and P & A wells are within a mile. No injection well is within a mile radius.

4. PROPOSED PRODUCTION FACILITIES (See MAPS 6, 7, & 8)

A 5.449 acre central tank battery (CTB) will be built on the south border of the Gladiator well pad. CTB will be accessed from the well pad. Tank battery will be built in southwest corner of the CTB. Flare will be in the southeast corner of the CTB. Process equipment will be north of the flare. Oil will be trucked to market. No gas line contract has been signed.

5. WATER SUPPLY (See MAP 9)

Water will be trucked from 275' deep water well C 03607 POD 1 on private land in NENE 24-21s-27e.

6. CONSTRUCTION MATERIALS & METHODS (See MAPS 10 - 14)

NM One Call (811) will be notified before construction starts. Top ≈6" of soil and brush will be stockpiled west of the pad. V-door will face east. Closed loop drilling system will be used. Caliche will be hauled from existing caliche pit on private (McDonald) land in SESE 16-23s-28e.

7. WASTE DISPOSAL

All trash will be placed in a portable trash cage. It will be hauled to the Eddy County landfill. There will be no trash burning. Contents (drill cuttings, mud, salts, and other chemicals) of the mud tanks will be hauled to R360's state approved (NM-01-0006) disposal site at Halfway. Human waste will be disposed of in chemical toilets and hauled to the Artesia wastewater treatment plant.

8. ANCILLARY FACILITIES

There will be no airstrip or camp. Camper trailers will be on location for the company man, tool pusher, and mud logger.

9. WELL SITE LAYOUT (See MAP 15)

Also see Rig Layout diagram for depictions of the well pad, trash cage, access onto the location, parking, living facilities, and rig orientation.

10. RECLAMATION (See MAPS 16 - 18)

Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the well pad 0.82 acre by removing caliche and reclaiming 100' on the east side of the pad. This will leave 3.80 acres for the anchors, pump jacks, and tractor-trailer turn around. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with BLM's requirements.

Once the wells are plugged, then reclamation will be completed within 6 months of plugging the last well. Reclamation will consist of removing caliche and deeply ripping on the contour. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with BLM's requirements. Noxious weeds will be controlled. Land use:

117.82' x 30' road = 0.08 acres
526' x 400' x 493' x 400' well pad = 4.62 acres
+ 493' x 518' x 448' x 506' central tank battery = 5.45 acres
10.15 acres short term
- 0.82 acres interim reclamation
9.33 acres long term (0.08 ac. road + 3.80 ac. well pad + 5.45 ac. CTB)

11. SURFACE OWNER

All construction will be on BLM land managed by the Carlsbad Field Office, 620 E. Greene St., Carlsbad NM 88220. Phone number is 575 234-5972.

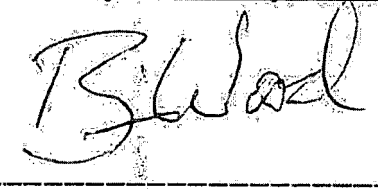
12. OTHER INFORMATION

On-site inspection was held on December 6, 2018 with Matt Wirth (BLM).

Lone Mountain has inspected the project area and will file an archaeology report.

CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 26th day of January, 2019.



Brian Wood, Consultant
Permits West, Inc.
37 Verano Loop, Santa Fe, NM 87508
(505) 466-8120 FAX: (505) 466-9682 Cellular: (505) 699-2276

Field representative will be:

Kelvin Fisher, Chief Operating Officer
Ridge Runner Resources Operating, LLC
1004 N. Big Spring St., Suite 325
Midland TX 79701
Office: (432) 684-7877
Mobile: (432) 634-5621

APD ID: 10400038584 **Submission Date:** 01/29/2019

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Well Type: OIL WELL **Well Work Type:** Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Bond Info Data Report

11/04/2019

APD ID: 10400038584 **Submission Date:** 01/29/2019

Operator Name: RIDGE RUNNER RESOURCES OPERATING LLC

Well Name: GLADIATOR FED COM 3502 B **Well Number:** 1H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001616

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: