RECEIVED

RECEIVED

Form 3160-3
(June 2015)

DEC 05 2019

DEC 05 2019

DISTRICT I-ARTESIA O.C.D.

DISTRICT I-ARTESIA O.C.D.

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM121938

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.
THE PEGGY FEDERAL
1-13
326731

2. Name of Operator
MAGNUM PRODUCING LP

9. API Well No.
30-005-64345

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
500 N. Shoreline Blvd., St.322 Corpus Christi TX 78401	(361)882-3858	PERMIAN / SAN ANDRES RACETRACK

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface NENE / 1474 FNL / 754 FEL / LAT 33.5362 / LONG -104.140492

At proposed prod. zone NENE / 1474 FNL / 754 FEL / LAT 33.5362 / LONG -104.140492

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 13 / T09S / R27E / NMP

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
24 miles	CHAVES	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
754 feet	1359.65	160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
644 feet	2100 feet / 2100 feet	FED: NMB001777

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3872 feet	02/01/2020	60 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)	Matt Giroux / Ph: (405)289-9326	09/20/2019

Title
Permitting Specialist/Environmental Scientist

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Ruben J Sanchez / Ph: (575)627-0250	12/02/2019

Title	Office
Assistant Field Manager, Lands & Minerals	ROSWELL

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: 12/02/2019

BLM 12-13-19

Need GCP

(Continued on page 2)

*(Instructions on page 2)

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: NENE / 1474 FNL / 754 FEL / TWSP: 09S / RANGE: 27E / SECTION: 13 / LAT: 33.5362 / LONG: -104.140492 (TVD: 2500 feet, MD: 2500 feet)
   PPP: (TVD: 0 feet, MD: 0 feet)
   BHL: NENE / 1474 FNL / 754 FEL / TWSP: 09S / RANGE: 27E / SECTION: 13 / LAT: 33.5362 / LONG: -104.140492 (TVD: 2100 feet, MD: 2100 feet)

BLM Point of Contact

Name:

Title:

Phone:

Email:

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:	**Magnum Producing, LP.**
LEASE NO.:	**NMNM-121938**
WELL NAME & NO.:	**The Peggy 1-13**
SURFACE HOLE FOOTAGE:	**1474' FNL & 0754' FEL**
LOCATION:	**Section 13, T. 9 S., R 27 E., NMPM**
COUNTY:	**Chaves County, New Mexico**

A. DRILLING OPERATIONS 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)

☒ **Chaves and Roosevelt Counties**
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.

1. **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.**

2. 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. 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 is located, this does not include the dog house or stairway area.

4. **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.**

B. CASING

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.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

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.

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.

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

Medium Cave/Karst
Possibility of water flows in the Santa Rosa, Chinle, and Rustler
Possibility of lost circulation in the San Andres.

1. The **8-5/8** inch surface casing shall be set at approximately **420** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

    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 is to include the lead cement slurry.

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 **5-1/2** inch production casing is:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

3. 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.

C. 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 53.

2. Variance approved to use flex line from BOP to choke manifold. 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.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. 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. **BOP specs must be on location for PET review.**

a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

4. 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. 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).

    c. 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.

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

    e. 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.**

    f. 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.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. 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.

JAM 112219

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MAGNUM PRODUCING LP
LEASE NO.:	NMNM-121938
WELL NAME & NO.:	THE PEGGY 1-13
SURFACE HOLE FOOTAGE:	[1789] ' F [N] L [1110] ' F [E] L
LOCATION:	Section 13, T 9. S., R 27 E., NMPM
COUNTY:	Chaves County, New Mexico

1. GENERAL PROVISIONS

Approval of the APD does not warrant that any party holds equitable or legal title. Any request for a variance shall be submitted to the Authorized Officer on Sundry Notice (Form 3160-5).

For BLM's surface operating standards and guidelines, refer to: The Gold Book , Fourth Edition – Revised 2007. To obtain a copy free of charge contact the Roswell Field Office (575) 627-0272 or visit BLM on the web at:
http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_practices/gold_book.html
All construction, operations, and reclamation shall follow the Onshore Oil and Gas Operations as described in the 43 CFR part 3160.

The Operator shall submit a Sundry Notice (Form 3160-5) to the Bureau of Land Management, Roswell Field Office (address above) for approval prior to beginning any new surface-disturbing activities or operations that are not specifically addressed and approved by this APD.

A site facility diagram and a site security plan shall be filed no later than 60 calendar days following first production (Onshore Order 3, Section III, I. and 43 CFR 3162.7-5).

2. 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, 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).

3. JURISDICTIONAL WATERS of the U.S.

The operator shall obtain appropriate permits from the U.S. Army Corps of Engineers prior to discharge or dredge and fill material into waters of the United States in accordance with Section 404 of the Clean Water Act. Contact The U.S. Army Corps of Engineers regulatory New Mexico Branch Office, 4101 Jefferson Plaza NE, Albuquerque, NM 87109-3435 at (505) 342-3678 or Email: CESPA-RD-NM@usace.army.mil if you have questions.

4. ARCHAEOLOGICAL, PALEONTOLOGICAL & HISTORICAL SITES

In the event that any cultural resource (prehistoric and historic period buildings, sites, structures, objects, and landscapes) and/or paleontological resource is discovered on public or Federal land by the holder, or any person working on behalf of the holder, the holder shall immediately halt the disturbance within 100 feet of the post-review discovery. The holder shall contact the BLM Authorized Officer within 24 hours for instructions:

BLM Authorized Officer:
Ruben Sanchez
Assistant Field Manager, Lands & Minerals
575-627-0250

If BLM Authorized Officer is Unavailable:
Courtney Carlson
Archaeologist
575-627-0328

The BLM Authorized Officer will coordinate with the appropriate specialists to ensure that qualified professionals evaluate the discovery, and to decide appropriate actions to prevent the loss of significant cultural or scientific values. The holder shall be responsible for the costs of evaluation, reporting, excavation, treatment, and/or disposition. Project implementation shall not proceed within 100 feet of the location of the inadvertent discovery until the BLM has concluded the post-review discovery process, and the BLM Authorized Officer has provided the holder with a written notice to proceed.

5. HUMAN REMAINS AND OBJECTS OF CULTURAL PATRIMONY

In the event that project implementation results in the inadvertent discovery of Native American human remains, funerary objects, sacred objects, and/or objects of cultural patrimony, the holder shall immediately halt the disturbance within 300 feet of the inadvertent discovery. The holder shall contact the BLM Authorized Officer within 24 hours for instructions:

BLM Authorized Officer:
Ruben Sanchez
Assistant Field Manager, Lands & Minerals
575-627-0250

If BLM Authorized Officer is Unavailable:
Quinton Franzoy
Law Enforcement Officer
575-910-0778

The holder shall be held responsible for ceasing activity and protecting the inadvertent discovery as well as for the costs of protection, evaluation, reporting, excavation, treatment, and/or disposition of the inadvertent discovery. The BLM shall use the process identified in the Native American Graves Protection and Repatriation Act (NAGPRA) and in 43 CFR 10.4 to proceed

according to the rights of the culturally affiliated party, as applicable. Project implementation within 300 feet of the location of the inadvertent discovery may resume 30 days after BLM certifies the notification, or when a written Plan of Action following 43 CFR 10.3(b)(1) is approved. In either case, the BLM Authorized Officer will provide the holder with a written notice to proceed.

6. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations (access road and/or well pad). 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.

7. CAVE AND KARST

Any Cave or Karst feature discovered by the operator or by any person working on the operator's behalf shall immediately report the feature 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. During drilling, previously unknown cave and karst features could be encountered. If a void is encountered while drilling and a loss of circulation occurs, lost drilling fluids can directly contaminate groundwater recharge areas, aquifers, and groundwater quality. Drilling operations can also lead to sudden collapse of underground voids.

To mitigate or lessen the probability of impacts associated with the drilling and production of oil and gas wells in karst areas, the guidelines listed in Appendix 3, Practices for Oil and Gas Drilling and Production in Cave and Karst Areas, as approved in the Roswell Resource Management Plan Amendment of 1997, page AP3-4 through AP 3-7 shall be followed.

A more complete discussion of the impacts of oil and gas drilling can be found in the *Dark Canyon Environmental Impact Statement of 1993*, published by the U.S. Department of the Interior, Bureau of Land Management.

8. CONSTRUCTION

NOTIFICATION: The BLM shall administer compliance and monitor construction of the access road and well pad. Notify Natural Resource Specialist, Ricky Flores at (575) 627-0339 **at least three (3) working days prior to commencing construction of the access road and/or well pad.**

A complete copy of the *approved* APD and the attached Conditions of Approval (COAs) **shall be kept on the well's location** for reference upon inspections.

Construction over and/or immediately adjacent to existing pipelines shall be coordinated, and in accordance with, the relevant pipeline companies' policy.

Any trench left open for (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, an agency approved monitor shall walk the entire length of the open trench and remove all trapped fauna. The bottom surface of the trench will be disturbed a minimum of 2 inches in order to arouse any buried fauna. All fauna will be released a minimum of 100 yards from the trench.

For trenches left open for (8) hours or more, earthen escape ramps (built at nor more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench. Structures will also be authorized within the trench. Metal structures will not be authorized. Structures used as escape ramps will be placed at no more than a 30 degree slope and spaced no more than 500 feet apart.

9. TOPSOIL:

When saturated soil conditions exist on access roads or location, construction shall be halted until soil material dries out or is frozen sufficiently for construction to proceed without undue damage and erosion to soils, roads and locations.

Topsoil shall be stripped following removal of vegetation during construction of well pads, pipelines, roads, or other surface facilities. This shall include all growth medium - at a minimum, the upper 2-6 inches of soil - but shall also include stripping of any additional topsoil present at a site, such as indicated by color or texture. Stripping depth may be specified during the onsite inspection. Stripped topsoil shall be stored separately from subsoil or other excavated material and replaced prior to interim seedbed preparation. No topsoil shall be stripped when soils are moisture-saturated or frozen below the stripping depth.

The topsoil will not be used to construct the containment structures or earthen dikes that are on the outside boundaries of the constructed well pad, tanks, and storage facilities.

Each construction area is site specific as to topsoil depth. It is the operator's responsibility to ensure that topsoil, caliche, or spoils are not mixed together.

(**Pads**): topsoil will be stripped and stored in separate piles from the spoils pile. They can be stored on opposite or adjacent sides. If topsoil and spoils must be stored on the same pad side together they shall be no closer than toe to toe, not overlapping. Each pile shall be kept within 30 feet of the pad's side. 100% of the topsoil will be used for both interim and final reclamation. 100% of topsoil will be respread over the disturbed areas during reclamation.

(**Roads**): topsoil shall be stripped in such a way to follow the road's edge outside of the surfacing or drivable area. During final reclamation, after removal of surface material and re-contouring, 100% of topsoil will be respread over the disturbed areas during reclamation. Vegetation in the topsoil will help hold re-seeding, moisture content, and reduce erosion.

10. WELL PAD SURFACING:

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational need. Surfacing of the well pad is not

required. If the operator elects to surface the well pad, the surfacing material will be required to be removed at the time of reclamation.

Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattle guard(s) on the access road 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 guard(s) that are in place and are utilized during lease operations. Gates or cattle guards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the authorized officer. A gate shall be constructed and fastened securely to H-braces.

Fence Requirement

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

11. PRODUCTION:

Storage

Fiberglass storage tanks are ***not*** permitted for the storage of production.

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim reclamation and re-vegetation of the well location.

Containment Structures

All production facilities shall have a lined containment structure large enough to contain **110% of the largest Tank (PLUS) 24 hours of production** (43 CFR 3162.5-1) ***Environmental Obligations***, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

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, **OIL GREEN** (Standard Environmental Color Chart June 2008).

Completion Report

In accordance with 43 CFR 3160, Form 3160-4 (Well Completion or Re-completion Report and Log) must be submitted to the Bureau of Land Management, Roswell Field Office within 30

days after completion of the well or producer. Copies of all open hole and cased hole logs, core descriptions, core analyses, well test data, geologic summaries, sample descriptions, formation test reports, stimulation reports, directional survey (if applicable), and all other surveys or data obtained and compiled during the drilling, completion, and/or work/over operations, shall be included with Form 3160-4.

12. INTERIM RECLAMATION:

Reclamation earthwork for interim and/or final reclamation shall be completed within 6 months of well completion or well plugging (weather permitting), and shall consist of: 1) backfilling pits, 2) re-contouring and stabilizing the well site, access road, cut/fill slopes, drainage channels, utility and pipeline corridors, and all other disturbed areas, to approximately the original contour, shape, function, and configuration that existed before construction (any compacted backfilling activities shall ensure proper spoils placement , settling, and stabilization, 3) surface ripping, prior to topsoil placement, to a depth of 18-24 inches deep on 18-24 inch centers to reduce compaction, 4) final grading and replacement of all topsoil so that no topsoil's remains in the stockpile, 5) seeding in accordance with reclamation portions of the APD and these COA's.

Any subsequent re-disturbance of interim reclamation shall be reclaimed within six (6) months by the same means described above.

Prior to conducting interim reclamation, the operator is required to:

- Submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.
- Contact BLM at least three (3) working days prior to conducting any interim reclamation activities, and prior to seeding.

During reclamation, the removal of caliche is important to increasing the success of re-vegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations. In addition, 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 re-vegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be re-vegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

Use a certified noxious weed-free seed mixture. Use seed tested for viability and purity in accordance with State law(s) within nine months prior to purchase. Use a commercial seed mixture certified or registered and tagged in accordance with State law(s). Make the seed mixture labels available for BLM inspection.

13. SEED MIX:

SEE ATTACHED SEED MIX.

WELL NAME	ECOSITE (ACCESS ROAD)	ECOSITE (PAD)
THE PEGGY 1-13	SANDY PLAINS CP-2	SANDY PLAINS CP-2

14. FINAL ABANDONMENT:

A. Upon abandonment of the well a Notice of Intent for Plug and Abandonment describing plugging procedures. Followed within 30 days you shall file with this office, a Subsequent Report of Abandonment (Form 3160-5). To be included with this report is where the plugs were placed; volumes of cement used and well bore schematic as plugged.

B. On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the Private Surface Land Owner agreements and a copy of the release is to be submitted upon abandonment.

C. The Operator shall promptly plug and abandoned each newly completed, re-completed or producing well which is not capable of producing in paying quantities. No well may be temporarily abandoned for more than 30 days without prior approval from this office. When justified by the Operator, BLM may authorize additional delays, no one of which may exceed an additional 12 months. Upon removal of drilling or producing equipment form the site of a well which is to be permanently abandoned, the surface of the lands disturbed shall be reclaimed in accordance with an approved Notice of Intent for final reclamation.

D. Final reclamation shall include: the removal of all solid waste, trash, surfacing materials, storage facilities and all other related equipment, flow lines, and meter housing, power poles, guy wires, and all other related power materials. All disturbed areas, i.e. cuts and fills, shall be re-contoured to their original surroundings. 100% of topsoil shall be used to resurface all disturbed areas including access roads. A label of the seed mix used shall be submitted with the Final Abandonment Notice (FAN) for review once reclamation is complete.

15. PIPELINE PROTECTION REQUIREMENT:

Precautionary measures shall be taken by the operator during construction of the access road to protect existing pipelines that the access road will cross over. An earthen berm; 2 feet high by 3 feet wide and 14 feet across the access road travelway (2' X 3' X 14'), shall be constructed over existing pipelines. The operator shall be held responsible for any damage to existing pipelines. If the pipeline is ruptured and/or damaged the operator shall immediately cease construction operations and repair the pipeline. The operator shall be held liable for any unsafe construction operations that threaten human life and/or cause the destruction of equipment.

16. WILDLIFE PROTECTION MEASURES – Best Management Practices (BMPs)

COA/Stipulation for above ground pipelines

- All pipelines laid on the surface will have sloped dirt berms built over them every 100 yards to allow reptiles, amphibians, small mammals, ground-dwelling birds and their broods access over them. Dirt berms should be no less than 12 inches in width and extend over all surface pipelines within the Right of Way. Berms should be maintained for the life of the project.

Wildlife Mortality - General
The operator will notify the Bureau of Land Management (BLM) authorized officer and nearest Fish and Wildlife Service (FWS) Law Enforcement office within 24 hours, if the operator discovers a dead or injured federally protected species (i.e., migratory bird species, bald or golden eagle, or species listed by the FWS as threatened or endangered) in or adjacent to a pit, trench, tank, exhaust stack, or fence. (If the operator is unable to contact the FWS Law Enforcement office, the operator must contact the nearest FWS Ecological Services office.)

1. **Closed top tanks are required for any containment system.**
All tanks are required to have a closed top tank.

2. **Chemical and Fuel Secondary Containment Systems**
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. Closed-top tanks are required for any secondary containment systems.

3. **Open-Vent Exhaust Stacks**
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. Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

17. WASTE, HAZARDOUS AND SOLID:

Waste materials produced during all phases of operation will be disposed of promptly in an approved manner so it will not impact the air, soil, water, vegetation or animals. "Waste" means all discarded matter including, but not limited to, human waste, trash,

garbage, refuse, oil drums, petroleum products, ashes and equipment. All liquid waste, completion fluids and drilling products associated with oil and gas operations will be contained and then removed and deposited in an approved disposal site. Portable toilets will remain on site throughout well pad construction, drilling and reclamation.

The operator and contractors shall ensure that all use, production, storage, transportation and disposal of hazardous materials, solid wastes and hazardous wastes associated with the drilling, completion and production of this well will be in accordance with all applicable existing or hereafter promulgated federal, state and local government rules, regulations and guidelines. All project related activities involving hazardous materials will be conducted in a manner to minimize potential environmental impacts. A file will be maintained onsite containing current Safety Data Sheets (SDS) for all chemicals, compounds and/or substances which are used in the course of construction, drilling, completion and production operations.

18. SURFACE WATER AND GROUNDWATER PROTECTION MEASURES – Best Management Practices (BMPs)\

A containment structure or earthen dike shall be constructed and maintained around the north, and east outside boundary of the well pad. The containment structure or earthen dike shall be constructed two (2) feet high (the containment structure or earthen dike can be constructed higher than the two (2) feet high minimum). The containment structure or earthen dike is required so that if a oilfield waste contaminant or product contaminant were leaked, spilled, and or released upon the well pad the oilfield waste contaminant or product contaminant shall be contained in order to prevent the contaminant from entering into the ephemeral drainage located north and east and downslope of the well pad location.

AFMSS

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

Operator Certification Data Report

12/02/2019

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 subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Matt Giroux **Signed on:** 09/20/2019

Title: Permitting Specialist/Environmental Scientist

Street Address: 1219 Classen Drive

City: Oklahoma City **State:** OK **Zip:** 73103

Phone: (405)289-9326

Email address: mgiroux@rsenergysolutions.com

Field Representative

Representative Name:

Street Address: 1219 Classen Drive

City: Oklahoma City **State:** OK **Zip:** 73103

Phone: (405)289-9326

Email address: mgiroux@rsenergysolutions.com

APD ID: 10400045543
Submission Date: 09/20/2019
Operator Name: MAGNUM PRODUCING LP
Well Name: THE PEGGY FEDERAL
Well Number: 1-13
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes
Show Final Text

Section 1 - General

APD ID: 10400045543
Tie to previous NOS? N
Submission Date: 09/20/2019
BLM Office: ROSWELL
User: Matt Giroux
Title: Permitting Specialist/Environmental Scientist
Federal/Indian APD: FED
Is the first lease penetrated for production Federal or Indian? FED
Lease number: NMNM121938
Lease Acres: 1359.65
Surface access agreement in place?
Allotted?
Reservation:
Agreement in place? NO
Federal or Indian agreement:
Agreement number:
Agreement name:
Keep application confidential? Y
Permitting Agent? YES
APD Operator: MAGNUM PRODUCING LP
Operator letter of designation:
The_Peggy_Executed_DOA_20190429124820.pdf
BLM_Permission_Letter_Signed_original_20191120084009.pdf

Operator Info

Operator Organization Name: MAGNUM PRODUCING LP
Operator Address: 500 N. Shoreline Blvd., St.322
Zip: 78401
Operator PO Box:
Operator City: Corpus Christi
State: TX
Operator Phone: (361)882-3858
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: THE PEGGY FEDERAL
Well Number: 1-13
Well API Number:
Field/Pool or Exploratory? Field and Pool
Field Name: PERMIAN
Pool Name: SAN ANDRES

Operator Name: MAGNUM PRODUCING LP

Well Name: THE PEGGY FEDERAL **Well Number:** 1-13

Is the proposed well in an area containing other mineral resources? USEABLE WATER,NATURAL GAS,OIL

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: SINGLE WELL **Multiple Well Pad Name:** **Number:**

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

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: EVALUATION

Describe sub-type:

Distance to town: 24 Miles **Distance to nearest well:** 644 FT **Distance to lease line:** 754 FT

Reservoir well spacing assigned acres Measurement: 160 Acres

Well plat: Well_Pad_Plat_The_Peggy_1_13_20190807121719.pdf

AL_Plat___The_Peggy_1_13_20190807121813.pdf

Vicinity_Map_The_Peggy_1_13_20190807121852.pdf

C102_Plat_The_Peggy_1_13_Signed_20191121075702.pdf

Well work start Date: 02/01/2020 **Duration:** 60 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: **Reference Datum:** GROUND LEVEL

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	1474	FNL	754	FEL	09S	27E	13	Aliquot NENE	33.5362	-104.140492	CHAVES	NEW MEXICO	NEW MEXICO	F	NMNM 121938	3872	2500	2500	Y

MAGNUM

April 9, 2019

Bureau of Land Management
Roswell Field Office
Attn: APD Adjudicator
2909 West Second Street
Roswell, NM 88201

Re: Magnum Producing, LP
Agent Authorization
Well: The Peggy 1-13
Section 13-T09S-R27E
Chavez County, NM

Dear Sir/Madam:

Magnum Producing, LP has contracted with Reagan Smith Energy Solutions, Inc. to assist in regulatory compliance associated with the The Peggy 1-13. Reagan Smith Energy Solutions, Inc. has the authority to act as Magnum Producing's agent to maintain regulatory compliance for The Peggy 1-13. This includes the submittal of an APD, Communitization Agreement, Designations of Operator, Sundry Notices, and any other regulatory documents on behalf of Magnum Producing, LP in order to maintain regulatory compliance with the Bureau of Land Management in regards to the above referenced project.

Sincerely,

Avinash Ahuja
Magnum Producing, LP

R & R Royalty, Ltd.

500 N. Shoreline, Suite 322
Corpus Christi, Texas 78401-0313

Phone: (361) 882-3858
Fax: (361) 884-9355
Direct: (361) 826-0105
avinash@magnumproducing.com

October 24, 2019

Bureau of Land Management
New Mexico State Office
301 Dinosaur Trail
Santa Fe, NM 87508

RE: BLM Lease NMNM121938
Peggy Federal #1-13
Chaves County, NM

To Whom it May Concern:

R&R Royalty, Ltd. is the Lessee of Record for BLM Lease NMNM 121938 in Chaves County, New Mexico.

Reagan Smith Energy Solutions, Inc. prepared and filed a Drilling Program whereby Magnum Producing, LP is the Operator for the Peggy #1-13 well.

Please accept this letter as notice that R&R Royalty, Ltd. hereby gives Magnum Producing, LP permission to penetrate the subject lease for drilling purposes.

If you need further information, please do not hesitate to contact me.

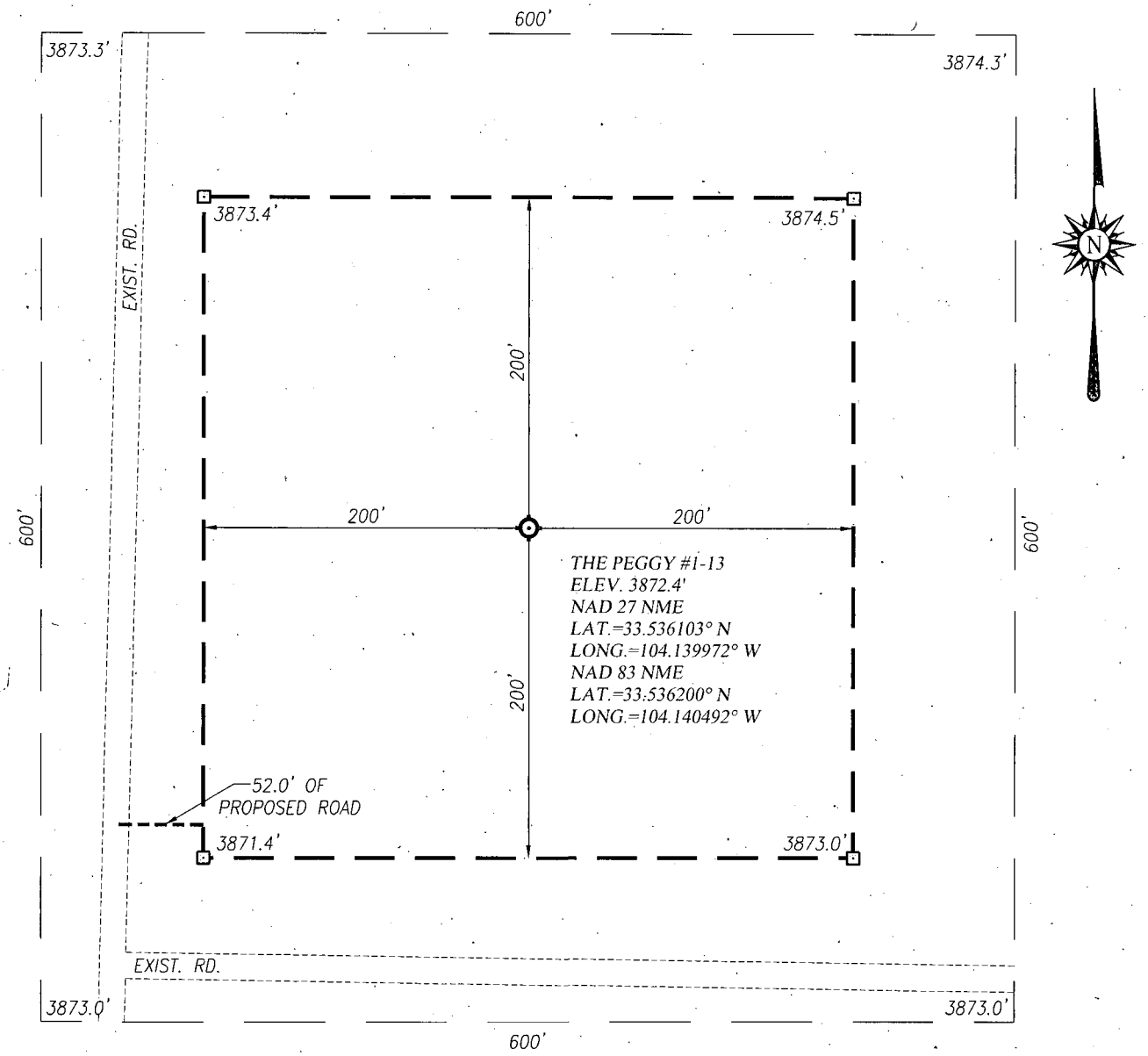
Sincerely,

R&R ROYALTY, LTD.
By: Magnum O&G, Inc., General Partner

Avinash C. Ahuja
President

ACA/km

WELL SITE PLAN



NOTE:
1) SEE "TOPOGRAPHICAL AND ACCESS ROAD MAP" FOR PROPOSED ROAD LOCATION.

DIRECTIONS TO LOCATION:

FROM THE INTERSECTION OF ST. HWY. 70 (CLOVIS HWY.) AND PONDEROSA RD. GO SOUTH AND SOUTHEAST ON PONDEROSA RD. APPROX. 4.25 MILES. TURN LEFT AND GO SOUTHEAST ON EL PASO PIPELINE ROAD APPROX. 4.6 MILES. TURN RIGHT AND GO SOUTH APPROX 500 FEET ROAD BENDS RIGHT AND CONTINUES SOUTHWEST APPROX. 0.75 MILES ROAD BENDS LEFT GO SOUTH APPROX. 0.65 MILES TO ROAD STAKED. FOLLOW STAKES EAST 52.0 FEET TO THIS PAD LOCATION.

100 0 100 200 Feet

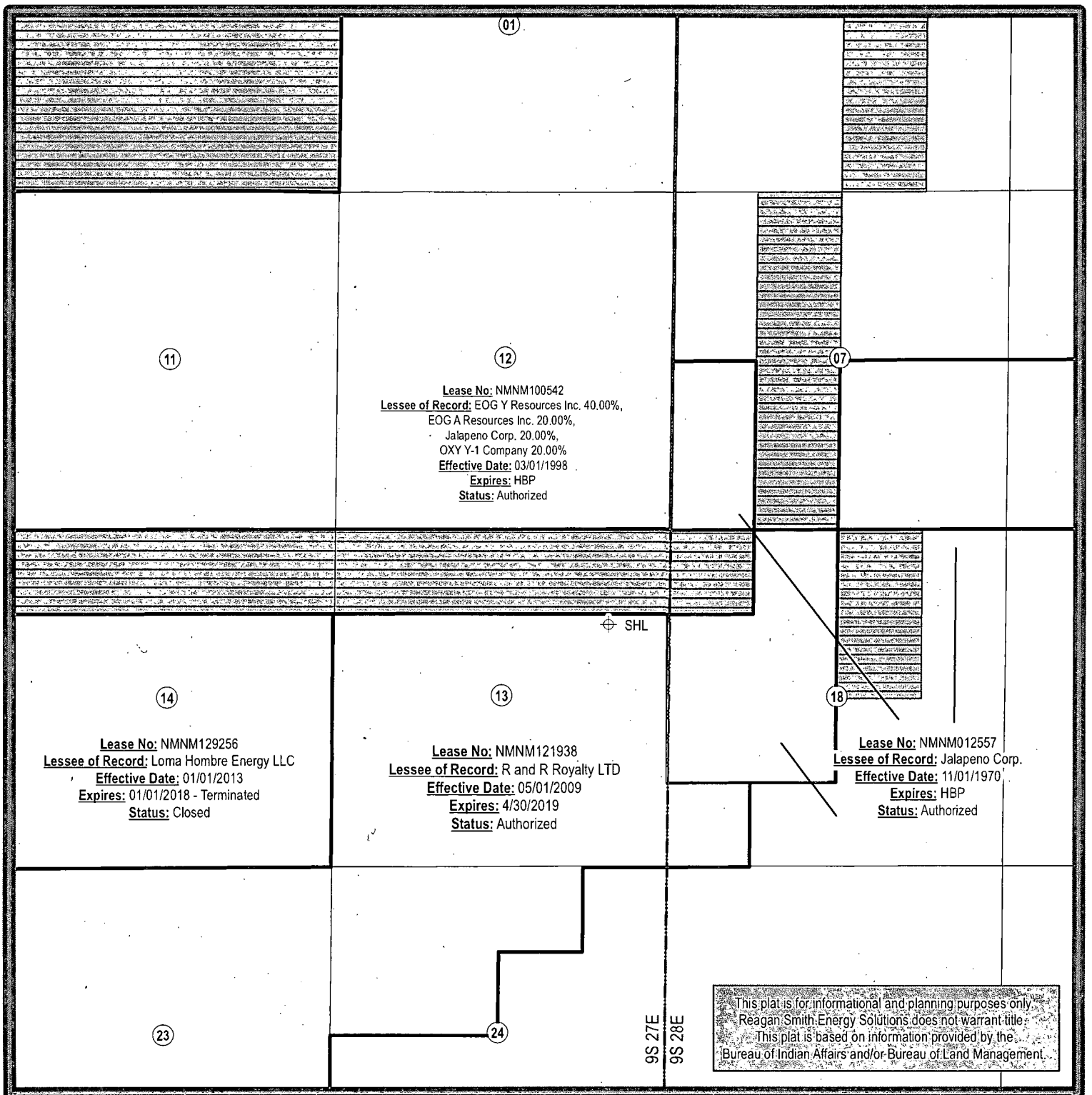
Scale: 1"=100'

MAGNUM PRODUCING, LP.

THE PEGGY #1-13 WELL LOCATED 1474 FEET FROM THE NORTH LINE AND 754 FEET FROM THE EAST LINE OF SECTION 13, TOWNSHIP 9 SOUTH, RANGE 27 EAST, N.M.P.M., CHAVES COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 04/24/19	CAD Date: 04/26/19	Drawn By: LSL
W.O. No.: 19110584	Rev: .	Rel. W.O.:	Sheet 1 of 1



Land Scout Land Scout Land Scout Land Scout Land Scout Land Scout Land Scout Land Scout

N
W E
S

Approximately 26.68 mi
NE of Roswell, NM

1:25,000

Land Scout

Agency Lease Plat

The Peggy Federal 1-13
Magnum Producing, LP
SHL 819 FT FEL & 1405 FT FNL
Section 13-T09S-R27E, N.M.P.M.
Chaves County, New Mexico

Created By: Giovanni Penna
Map Created: 5/7/2019
www.landscout.com
info@landscout.com
(405) 600-3350

REAGAN SMITH ENERGY SOLUTIONS, INC.

- The Peggy 1-13
- Bureau of Land Management
- Communitization Agreements
- State Land
- U.S. Army Corps of Engineers Reservoirs
- U.S. Army Corps of Engineers Recreation Areas
- U.S. Army Corps of Engineers Boundaries
- U.S. Forest Service Boundaries
- USFWS Boundaries
- Bureau of Reclamation
- Department of Defense
- Federal Condemnation Tracts

Document Path: S:\PERMITTING\APDs\APD - New Mexico\Chavez\Magnum Producing\The Peggy 1-13\Plats\GIS\Peggy Lease Plat.mxd

APD ID: 10400045543
Submission Date: 09/20/2019
Operator Name: MAGNUM PRODUCING LP
Well Name: THE PEGGY FEDERAL
Well Number: 1-13
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	PERMIAN	3872	0	0	SHALE	USEABLE WATER	N
2	YATES	2972	900	900	SHALE	USEABLE WATER,NATURAL GAS,OIL	N
3	QUEEN	2712	1160	1160	SHALE	USEABLE WATER,NATURAL GAS,OIL	N
4	GRAYBURG	2290	1582	1582	SANDSTONE	USEABLE WATER,NATURAL GAS,OIL	N
5	SAN ANDRES	1772	2100	2100	SANDSTONE	USEABLE WATER,NATURAL GAS,OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M **Rating Depth:** 2100

Equipment: Three thousand (3M) psi working pressure Blind Rams and Pipe Rams and a three thousand (3M) psi Annular Preventer will be installed on all casing. A Two (2) chokes manifold will be used.
Requesting Variance? YES

Variance request: A variance to the requirement of a rigid steel line connecting to the choke manifold is requested. Specifications for the flex hose are provided with the BOP schematic in exhibit section.
Testing Procedure: A third party testing company will conduct pressure tests and record prior to drilling out below casing shoes. The BOP, Choke, Choke Manifold, Top Drive Valves and Floor Safety Valves will be tested to 3,000 psi prior to drilling the surface casing and below the surface casing shoe. The Annular Preventer will be tested to 3,000 psi prior to drilling the surface casing and below the surface casing shoe. In addition, the BOP equipment will be tested after any repairs to the equipment as well as drilling out below any casing string. Pipe rams, blind rams, and annular preventer will be activated on each trip, and weekly BOP drills will be held with each crew. Proposed Cement Program Floor safety valves that are full open and sized to fit drill pipe and collars will be available on the rig floor in the open position when the Kelly is not in use.
Choke Diagram Attachment:

3_inch_3M_Choke_Manifold_20190430100404.pdf

BOP Diagram Attachment:

BOP_Stack_3M_20190430100416.pdf

Operator Name: MAGNUM PRODUCING LP

Well Name: THE PEGGY FEDERAL **Well Number:** 1-13

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	420	200	1.87	11.5	374	100	ECONOCEM SYSTEM	94 LBM/SK, 1% cacl, 0.125 LBM/SK POLY-E-FLAKE, 17.38 Gal/sk Fresh Water
PRODUCTION	Lead		0	1200	295	1.35	14.2	398.25	75	SHALECEM SYSTEM	1.5% foamer, .5%HR601, 5.56g/sk
PRODUCTION	Tail		1200	2100	150	1.95	14.2	293	75	SHALECEM SYSTEM	1.5% foamer, .5%HR601, 5.56g/sk

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: An industry accepted medium will be stored on location in the event that there is a loss of circulation in the well bore.

Describe the mud monitoring system utilized: The mud system will run as a closed loop system with PVT monitoring.

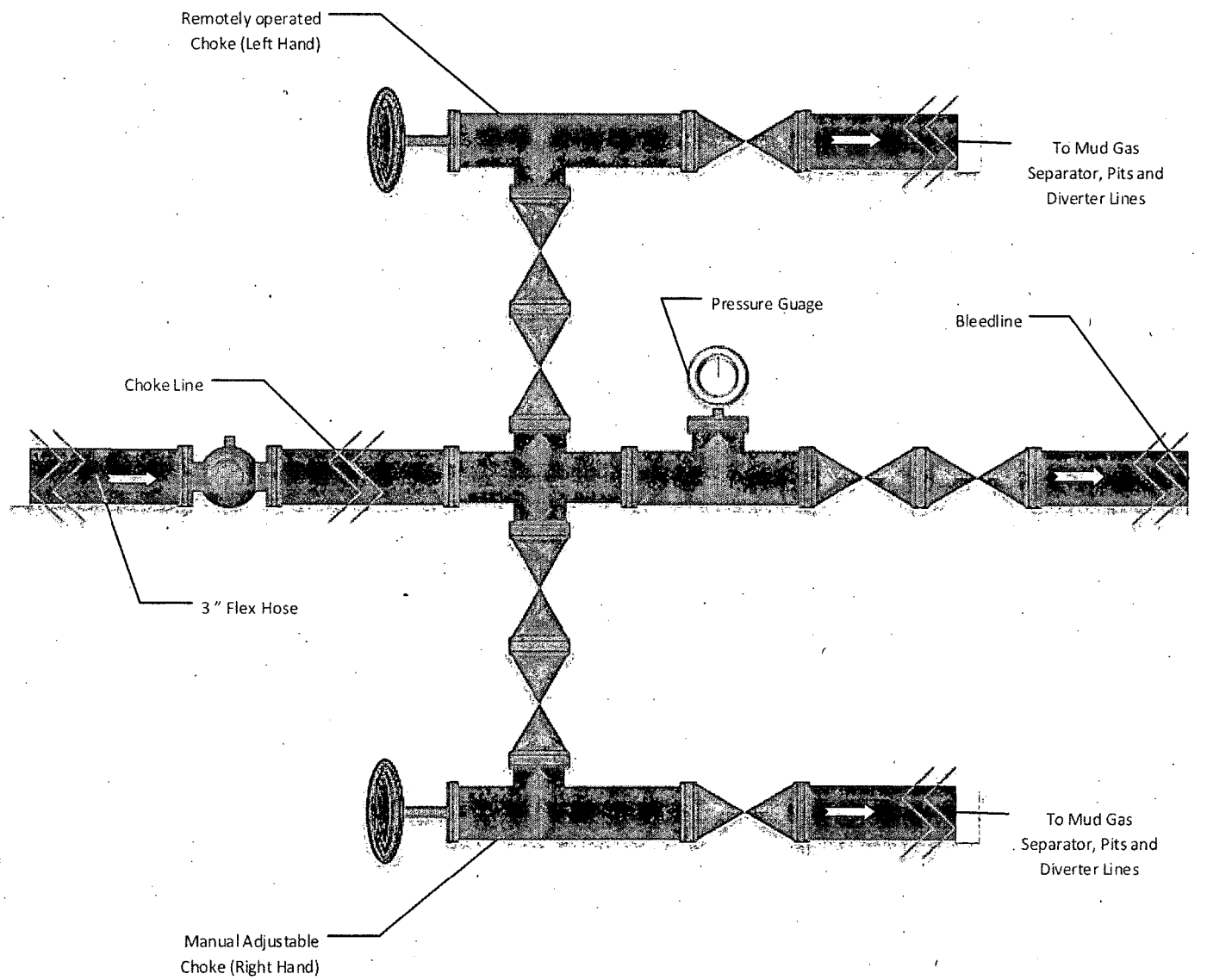
Circulating Medium Table

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	420	WATER-BASED MUD	8.6	8.8							
0	2100	OIL-BASED MUD	8.6	9.3							

CHOKE MANIFOLD

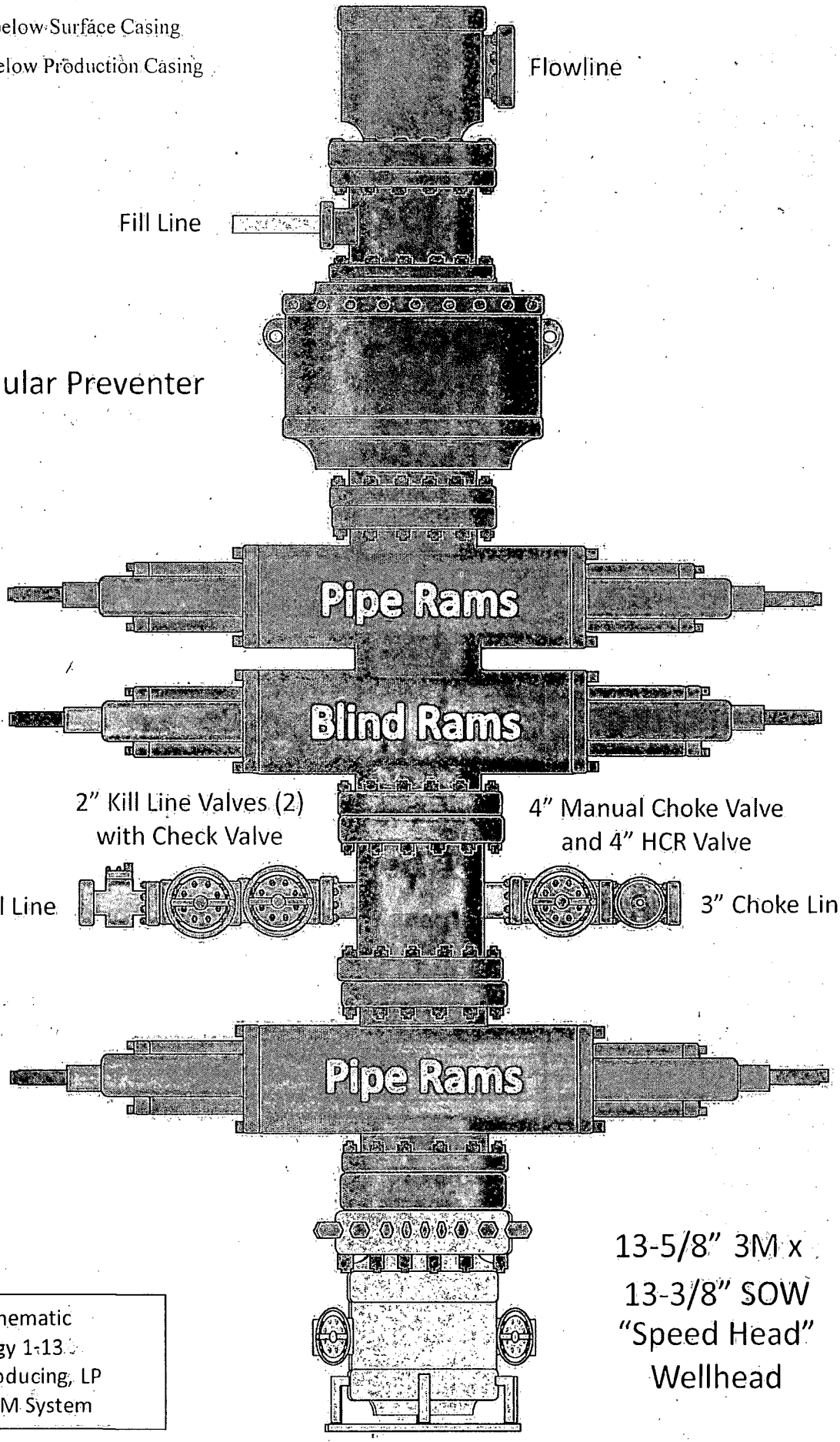
3" 3M System

All valves and lines will be 3" min unless otherwise indicated.



Hole Sections Utilized

- 13-3/8" hole below Surface Casing
- 5-1/2" hole below Production Casing



BOP Schematic
The Peggy 1-13
Magnum Producing, LP
Required: 3M System

Preventer will be tested to 3,000 psi prior to drilling the surface casing and below the surface casing shoe.

In addition, the BOP equipment wil be tested after any repairs to the equipment as well as drilling out below any casing string. Pipe rams, blind rams, and annular preventer will be activated on each trip, and weekly BOP drills will be held with each crew.

Floor safety valves that are full open and sized to fit drill pipe and collars will be available on the rig floor in the opn position when the Kelly is not in use.

1.4 Proposed Casing and Design Analysis

1.4.1 Proposed Casing Program

Interval	Length (ft)	Size (in.)	Weight /ft (lbs)	Grade	Thread	Condition	Hole size (in.)
Conductor	80	20.0	40	H-40		New	25
Surface	420	8.6	24	J-55	STC	New	12.25
Production	2,100	5.5	17	J-55	STC	New	7.875

1.4.2 Casing Specifications

Interval	TVD @ Shoe (ft)	TMD @ Shoe (ft)	Weight /ft	Grade	Collapse (psi)	Internal Yld (psi)	Body Yld Strength (psi)	Joint Strength (psi)
Coductor								
Surface	420	420	24	J-55	1,370	2,950	381,000	244,000
Production	2,100	2,100	17	J-55	4,910	5,320	273,000	229,000

1.4.3 Proposed Cement Program

Surface Casing

Lead/Tail	TOC (MD)	Bottom of Cmt (MD)	Density (ppg)	Yield (ft3/sk)	Excess (%)	Volume (ft3)	# of SKS Cmt	# of Centzrs
Sur. Lead	Surface	420	11.5	1.87	100	374	200	2
Sur. Tail	-	0	0	0.00	0	0	0	-

Lead Cmt Type: ECONOCEM SYSTEM
Lead Additives: 94 LBM/SK, 1% cacl, 0.125 LBM/SK POLY-E-FLAKE, 17.38 Gal/sk Fresh Water
Tail Cmt Type: 0
Tail Additives: 0

Production Casing

Lead/Tail	TOC (MD)	Bottom of Cmt (MD)	Density (ppg)	Yield (ft3/sk)	Excess (%)	Volume (ft3)	# of SKS Cmt	# of Centzrs
Prod. Lead	0	1200	14.20	1.35	75	398.25	295	4
Prod. Tail	1200	2,100	14.20	1.95	75	293	150	3

Lead Cmt Type: SHALECEM SYSTEM
Lead Additives: 1.5% foamer, .5%HR601, 5.56g/sk water
Tail Cmt Type: SHALECEM SYSTEM
Tail Additives: 1.5% foamer, .5%HR601, 5.56g/sk water

* Operator reserves the right to change cement designs as hole conditions may warrant

1.5 Proposed Mud Program

Interval	Top (TVD)	Bottom (TMD)	Type	Max Mud Weight Pressure Control Design	Max Mud Weight Hole Control Design	Viscosity	Formation Fracture Gradient	Fluid Loss
Surface	*Surface*	420	WB	8.8	8.6	32-40	0.75	NC
Production	0	2,100	OBM	9.3	8.6	45-55	0.75	8-10 cc

Mud weight increases at shoe depths are for pressure control. Mud weight increase in the curve and lateral section of the hole are for hole stability, not pressure control. Mud weight assumptions for casing load designs exceed anticipated maximum mud weight for balanced drilling in all hole sections. Expected mud weights in producing formation will be 0.5 to 1.0 ppg greater than formation pressure (i.e. overbalanced drilling)

The mud system will run as a closed loop system with PVT monitoring. All drill cuttings and liquid mud will be hauled to an approved site for disposal or soil farmed upon receiving appropriate approval.

An industry accepted medium will be stored on location in the event that there is a loss of circulation in the well bore.

1.6 Drilling Design Analysis

1.6.1 Casing Safety Factors

Interval	Max TVD (ft)	Burst Safety Factor (Min 1.0)	Collapse Safety Factor (Min 1.1)	Tensile Safety Factor (Min 1.8)
Surface	420	15.35	7.13	24.21
Production	2,100	5.24	4.83	6.41

1.6.2 Casing Design Assumptions

1.9 Downhole Conditions

Zones of possible lost circulation: N/A
Zones of possible abnormal pressure: N/A
Maximum bottom hole tempurature: 240 degrees F
Maximum bottom hole pressure: 1,500

REAGAN SMITH
ENERGY SOLUTIONS, INC.

Drilling Program

Operator

Magnum Producing, LP

Project Name

The Peggy 1-13

SHL: 1,474' FNL & 754' FEL Section 13-09S-27E, Chavez County, NM

Prepared By

Reagan Smith Energy Solutions, Inc.

Submitted To

New Mexico Bureau of Land Management Roswell Field Office

Please address inquiries, question, scheduling of meetings and deficiency statements, if any, to Scott St. John and/or Monica Smith Griffin at the address shown below:

Reagan Smith Energy Solutions
1219 Classen Drive
Oklahoma City, OK 73103
(405) 286-9326
sstjohn@rsenergysolutions.com
msmith@rsenergysolutions.com

1.0 Estimated Formation Tops

Formation	TVD @ Surface	TVD @ KB	TVD @ Bottom
T. Yates	500	520	900
T. Queen	900	920	1,160
T. Grayburg	1,160	1,180	1,582
T. San Adres	1,582	1,602	2,100

Target Formation and Total Depth

Total Measured Depth(ft): 2,100
Total Vertical Depth (ft): 2,100
Target Formation: T. San Adres

1.2 Estimated Depths of Anticipated Fresh Water, Oil, and Gas

Substance	Depth (ft)
Fresh Water	200
Base to Treatable Water	370
Top of Hydrocarbons	900
Bottom of Hydrocarbons	2,100

1.2.2 State Water Protection Compliance

The well will not be drilled closer than 200' to the leaseline, therefore, no variance to complete the well closer to 200' from the spacing unit is requested.

1.3 Pressure Control Equipment

Three thousand (3M) psi working pressure Blind Rams and Pipe Rams and a three thousand (3M) psi Annular Preventer will be installed on all casing. A Two (2) chokes manifold will be used.

A variance to the requirement of a rigid steel line connecting to the choke manifold is requested. Specifications for the flex hose are provided with the BOP schematic in exhibit section.

A third party testing company will conduct pressure tests and record prior to driling out below casing shoes. The BOP, Choke, Choke Manifold, Top Drive Valves and Floor Safety Valves will be tested to 3,000 psi prior to drilling the surface casing and below the surface casing shoe. The Annular

Preventer will be tested to 3,000 psi prior to drilling the surface casing and below the surface casing shoe.

In addition, the BOP equipment wil be tested after any repairs to the equipment as well as drilling out below any casing string. Pipe rams, blind rams, and annular preventer will be activated on each trip, and weekly BOP drills will be held with each crew.

Floor safety valves that are full open and sized to fit drill pipe and collars will be available on the rig floor in the opn position when the Kelly is not in use.

1.4 Proposed Casing and Design Analysis

1.4.1 Proposed Casing Program

Interval	Length (ft)	Size (in.)	Weight /ft (lbs)	Grade	Thread	Condition	Hole size (in.)
Conductor	80	20.0	40	H-40		New	25
Surface	420	8.6	24	J-55	STC	New	12.25
Production	2,100	5.5	17	J-55	STC	New	7.875

1.4.2 Casing Specifications

Interval	TVD @ Shoe (ft)	TMD @ Shoe (ft)	Weight /ft	Grade	Collapse (psi)	Internal Yld (psi)	Body Yld Strength (psi)	Joint Strength (psi)
Coductor								
Surface	420	420	24	J-55	1,370	2,950	381,000	244,000
Production	2,100	2,100	17	J-55	4,910	5,320	273,000	229,000

1.4.3 Proposed Cement Program

Surface Casing

Lead/Tail	TOC (MD)	Bottom of Cmt (MD)	Density (ppg)	Yield (ft3/sk)	Excess (%)	Volume (ft3)	# of SKS Cmt	# of Centzrs
Sur. Lead	Surface	420	11.5	1.87	100	374	200	2
Sur. Tail	-	0	0	0.00	0	0	0	-

Lead Cmt Type: ECONOCEM SYSTEM
Lead Additives: 94 LBM/SK, 1% cacl, 0.125 LBM/SK POLY-E-FLAKE, 17.38 Gal/sk Fresh Water
Tail Cmt Type: 0
Tail Additives: 0

Production Casing

Lead/Tail	TOC (MD)	Bottom of Cmt (MD)	Density (ppg)	Yield (ft3/sk)	Excess (%)	Volume (ft3)	# of SKS Cmt	# of Centzrs
Prod. Lead	0	1200	14.20	1.35	75	398.25	295	4
Prod. Tail	1200	2,100	14.20	1.95	75	293	150	3

Lead Cmt Type: SHALECEM SYSTEM
Lead Additives: 1.5% foamer, .5%HR601, 5.56g/sk water
Tail Cmt Type: SHALECEM SYSTEM
Tail Additives: 1.5% foamer, .5%HR601, 5.56g/sk water

* Operator reserves the right to change cement designs as hole conditions may warrant

1.5 Proposed Mud Program

Interval	Top (TVD)	Bottom (TMD)	Type	Max Mud Weight Pressure Control Design	Max Mud Weight Hole Control Design	Viscosity	Formation Fracture Gradient	Fluid Loss
Surface	*Surface*	420	WB	8.8	8.6	32-40	0.75	NC
Production	*0*	2,100	OBM	9.3	8.6	45-55	0.75	8-10 cc

Mud weight increases at shoe depths are for pressure control. Mud weight increase in the curve and lateral section of the hole are for hole stability, not pressure control. Mud weight assumptions for casing load designs exceed anticipated maximum mud weight for balanced drilling in all hole sections. Expected mud weights in producing formation will be 0.5 to 1.0 ppg greater than formation pressure (i.e. overbalanced drilling)

The mud system will run as a closed loop system with PVT monitoring. All drill cuttings and liquid mud will be hauled to an approved site for disposal or soil farmed upon receiving appropriate approval.

An industry accepted medium will be stored on location in the event that there is a loss of circulation in the well bore.

1.6 Drilling Design Analysis

1.6.1 Casing Safety Factors

Interval	Max TVD (ft)	Burst Safety Factor (Min 1.0)	Collapse Safety Factor (Min 1.1)	Tensile Safety Factor (Min 1.8)
Surface	420	15.35	7.13	24.21
Production	2,100	5.24	4.83	6.41

1.6.2 Casing Design Assumptions

Surface Casing Design Assumptions

Burst Design Assumptions:

Calculations assume complete evacuation behind pipe.

Collapse Design Assumptions:

Calculations assume complete evacuation behind pipe.

Tension Design Assumptions:
Calculations assume string held in suspension to TVD.

Production Casing Design Assumptions

Burst Design Assumptions:

Calculations assume complete evacuation behind pipe.

Collapse Design Assumptions:

Calculations assume complete evacuation behind pipe.

Tension Design Assumptions:
Calculations assume string held in suspension to TVD.

1.7 Completion Program and Casing Design

Hydraulic fracturing will occur through the production casing. The burst design calculation assumes TOC at 0 ft., therefore, the backside of the production casing is not evacuated. The maximum pumping pressure is 5000 psi with a maximum proppant fluid weight of 9.6ppg. The design safety factor for burst is 1.064.

Upon request, operator will provide proof of cement bonding by bond log. Operator is responsible for log interpretation and certification prior to frac treatment.

Upon request, operator will provide estimated fracture lengths, flowback storage, volumes of fluids and amount of sand to be used, and number of stages of frac procedure. Furthermore, a report of the annulus pressures before and after each stage of treatment may be requested by the BLM. The report may include chemical additives (other than proprietary), dissolved solids in frac fluid, and depth of perforations.

1.8 Drilling Evaluation Program

1.9 Downhole Conditions

Zones of possible lost circulation: N/A
Zones of possible abnormal pressure: N/A
Maximum bottom hole tempurature: 240 degrees F
Maximum bottom hole pressure: 1,500

Magnum Producing, LP
HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN
The Peggy Federal 1-13
Assumed 100 ppm ROE = 3000'

100 ppm H2S concentration shall trigger activation of this plan.

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be rigged up and in use when the company drills out from under surface casing. H_2S monitors, warning signs, wind indicators and flags will be in use.

A. All personnel shall receive proper H2S training in accordance with Onshore Order 6 III.C.3.a

B. Briefing Area: Two perpendicular areas will be designated by signs and readily accessible.

C. Required Emergency Equipment:

- Well control equipment
  a. Flare line 150' from wellhead to be ignited by flare gun.
  b. Choke manifold with a remotely operated choke.
  c. Mud/Gas Separator.

- Protective Equipment for essential personnel.
  Breathing apparatus:
  a. Rescue Packs (SCBA) – 1 unit shall be placed at each briefing area. 2 units shall be stored in the safety trailer.
  b. Work/Escape packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
  c. Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.

  Auxiliary Rescue Equipment:
  a. Stretcher
  b. Two OSHA full body harness
  c. 100 ft. 5/8" OSHA approved rope
  d. One 20# class ABC fire extinguisher

- H2S detection and monitoring Equipment:
  The stationary detector with three sensors will be placed in the upper doghouse, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor, Bell nipple, end of flare line or where well bore fluid is being discharged (Gas sample tubes will be stored in the safety trailer).

- Visual warning systems.
  a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
  b. A colored condition flag will be on display, reflecting the current condition, at the drilling site.
  c. Two wind socks will be placed in strategic locations being visible from all angles.

- Mud Program:
  The mud program has been designated to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.

- Metallurgy:
  a. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, shall be suitable for H2S service.
  b. All elastomers used for packing and seals shall be H2S trim.

- Communication:
  Communication will be via two way radio in emergency and company vehicles. Cell phones and land lines where available.

H_2S Operations

Though no H_2S is anticipated during the drilling operation, this contingency plan will provide for methods to ensure the well is kept under control in the event an H_2S reading of 100 ppm or more are encountered. Once personnel are safe and the proper protective gear is in place and on personnel, the operator and rig crew essential personnel will ensure the well is under control, suspend drilling operations and shut-in the well (unless pressure build up or other operational situations dictate suspending operations will prevent well control), increase the mud weight and circulate all gas from the hole utilizing the mud/gas separator downstream of the choke, the choke manifold and the emergency flare system located 150' from the well. Bring the mud system into compliance and the H_2S level below 10 ppm, then notify all emergency officers that drilling ahead is practical and safe.

Proceed with drilling ahead only after all provisions of Onshore Order 6, Section III.C. have been satisfied.

Ignition of Gas source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the

NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = I	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = I	2 ppm	N/A	1000 ppm

Contacting Authorities

Magnum Producing, LP personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Legacy's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

Emergency Assistance Telephone List

PUBLIC SAFETY:	***911 or***
Chaves County Sheriff or Police	(575) 624-6500
Fire Department	(575) 624-6800
Hospital	(575) 622-8170
Ambulance	911
Department of Public Safety	(392) 392-5588
Oil Conservation Division	(575) 748-1823
New Mexico Energy, Minerals & Natural Resources Department	(575) 748-1283

Magnum Producing, LP	
Magnum Producing, LP	Office: (405) 286-9326

Drilling Engineer:
Scott St. John

Magnum Producing, LP Representative:	**Office:(405) 286-9326**

EHS Coordinator: **Field Operations Manager:** **Scott St. John**	**Office: (405) 296-9326** **Cell: (405) 323-7483**
Field Safety Technician: **Scott St. John**	**Office: (405) 296-9326** **Cell: (405) 323-7483**

Evacuee Description:
Residents: THERE ARE NO RESIDENTS WITHIN 3000' ROE.