ATS-10-125

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Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Split Estate

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☑ DRILL ☐ REENTER	5 Lease Serial No. **NM-104699**
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone	6. If Indian, Allotee or Tribe Name
2. Name of Operator **Seely Oil Company** (20497)	7 If Unit or CA Agreement, Name and No.
3a. Address **815 W. 10th St. Ft. Worth, TX 76102**	8. Lease Name and Well No. (38012) **EK "19" Federal, Well No. 1**
3b. Phone No. *(include area code)* **817-332-1377**	9 API Well No. **30-025-39658**
4. Location of Well *(Report location clearly and in accordance with any State requirements *)* At surface **2310 FNL & 2310' FEL** Unit G At proposed prod. zone **same**	10. Field and Pool, or Exploratory **EK Delaware** (21655) 11. Sec., T. R. M. or Blk. and Survey or Area **Sec. 19-T18S-R34E**
14 Distance in miles and direction from nearest town or post office* **52 miles SE of Artesia, NM or 30 miles NW of Hobbs, NM**	12 County or Parish **Lea** / 13. State **NM**

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any) **330'**	16 No. of acres in lease **120**	17. Spacing Unit dedicated to this well **40**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft **P/A wells**	19 Proposed Depth **6,100'**	20 BLM/BIA Bond No. on file **NM-1816**
21. Elevations (Show whether DF, KDB, RT, GL, etc.) **4014' GL**	22. Approximate date work will start* **01/19/2010**	23. Estimated duration **4 weeks**

24. Attachments

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

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 shall 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 required by the authorized officer.

25 Signature George R Smith	Name *(Printed/Typed)* **George R. Smith**	Date **12/21/2009**
Title **POA Agent for Seely Oil Company**		
Approved by *(Signature)* **/s/ Don Peterson**	Name *(Printed/Typed)*	Date **JAN 27 2010**
Title **FIELD MANAGER**	Office **CARLSBAD FIELD OFFICE**	

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. **APPROVAL FOR TWO YEARS**

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.

**(Instructions on page 2)*

Lea County Controlled Water Basin

KZ

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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State of New Mexico
Energy, Minerals and Natural Resources Department

CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised October 15, 2009

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-39658	21655	E-K;Delaware

Property Code	Property Name	Well Number
~~34759~~ 38012	EK "19" FEDERAL	1

OGRID No.	Operator Name	Elevation
20497	SEELY OIL COMPANY	4014'

Surface Location

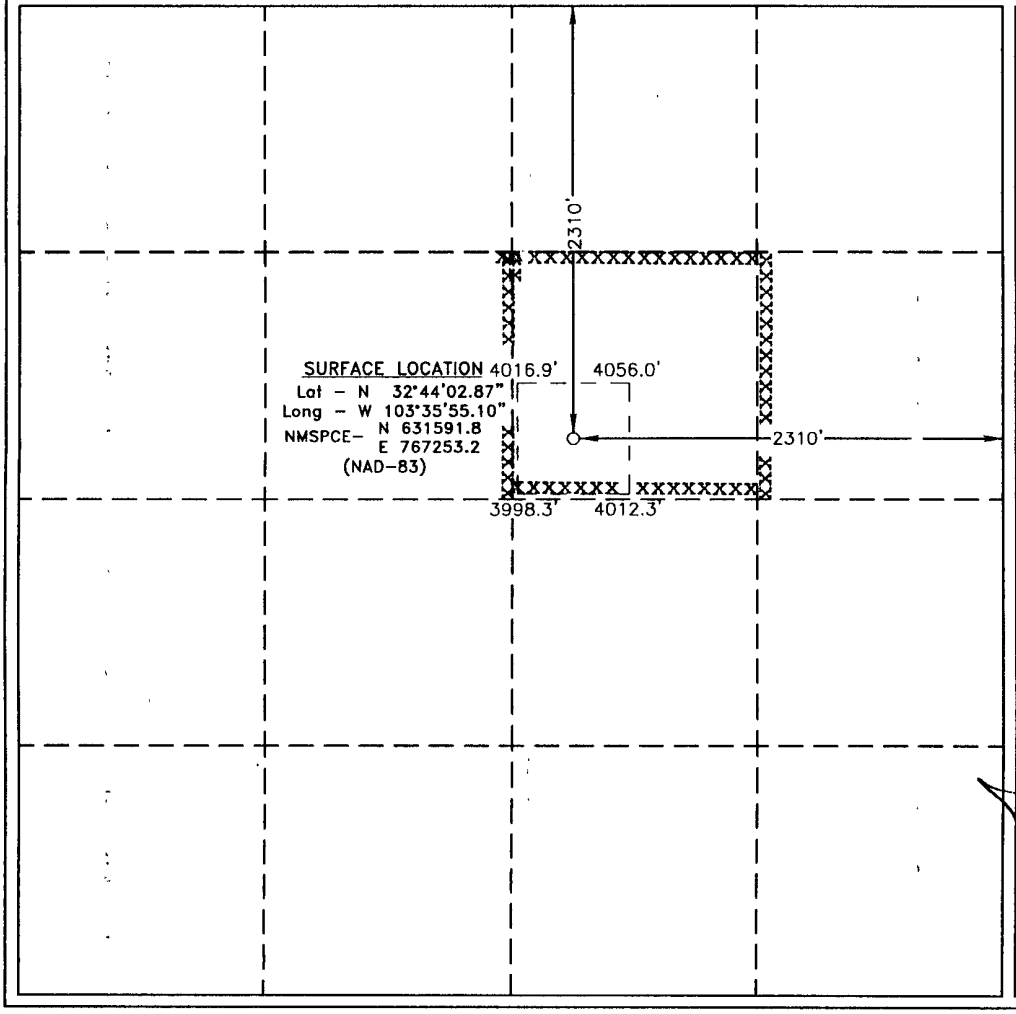
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	19	18 S	34 E		2310	NORTH	2310	EAST	LEA

Bottom Hole Location If Different From Surface

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

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

George R. Smith 12/21/09
Signature Date

George R. Smith, POA agent
Printed Name

SURVEYOR CERTIFICATION

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

NOVEMBER 24, 2009
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

W.O. No. 22000

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SELF-CERTIFICATION STATEMENT
FROM LESSEE/OPERATOR

SURFACE OWNER IDENTIFICATION

Federal or Indian Lease No NM NM 104699

I hereby certify to the Authorized Officer of the Bureau of Land Management that I have reached one of the following agreements with the Surface Owner; or after failure of my good-faith effort to come to an agreement of any kind with the Surface Owner, have provided a bond and will provide evidence of service of such bond to the Surface Owner:

1) _____ I have a signed access agreement to enter the leased lands;

2) _____ I have a signed waiver from the surface owner;

3) X I have entered into an agreement regarding compensation to the surface owner for damages for loss of crops and tangible improvements.

4) _____ because I have been unable to reach either 1), 2), or 3) with the surface owner, I have obtained a bond to cover loss of crops and damages to tangible improvements and served the surface owner with a copy of the bond.

Surface owner information: (if available after diligent effort)

Surface Owner Name: Ken Smith
Surface Owner Address: 267 Smith Ranch Road Hobbs, NM 88240-8514
Surface Owner Phone Number: 575-390-1247

Signed this 3rd -- day of December -, 2009.

David Henderson
(Name of lessee/operator)

I (Surface Owner) accept _____ do not accept _____ the lessee or operator=s Surface Owner Agreement under 1, 2, or 3 above.

Signed this _____ – day of _____, 200__.

_____
(Signature of Surface Owner if an agreement has been reached)

POWER OF ATTORNEY

DESIGNATION OF AGENT

Seely Oil Company, hereby names the following person as its agent

Name of Agent: George R. Smith d/b/a Energy Administrative Services Company

Agents Address: P.O. Box 458, Roswell, NM 88202

Agent's Telephone Number: (575) 623-4940

GRANT OF SPECIAL AUTHORITY

Seely Oil Company, grants its agent the authority to act for it with respect to the following only:

1. Executing forms required to be filed with the Bureau of Land Management of the Department of Interior of the United States of America.

2. Executing forms required to be filed with the Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department.

EFFECTIVE DATE

This power of attorney is effective immediately.

RELIANCE ON THE POWER OF ATTORNEY

Any person, including the agent, may rely upon the validity of this power of attorney or a copy of it unless that person knows it has terminated or is invalid.

SIGNATURE AND ACKNOWLEDGMENT

Charles W Seely, Jr

By: Charles W Seely, Jr.

Title: Vice - President

Date: 12-21-2009

Address: 815 W. 10th St. Fort Worth, TX 76102

Telephone: (817)332-1377

STATE OF TEXAS

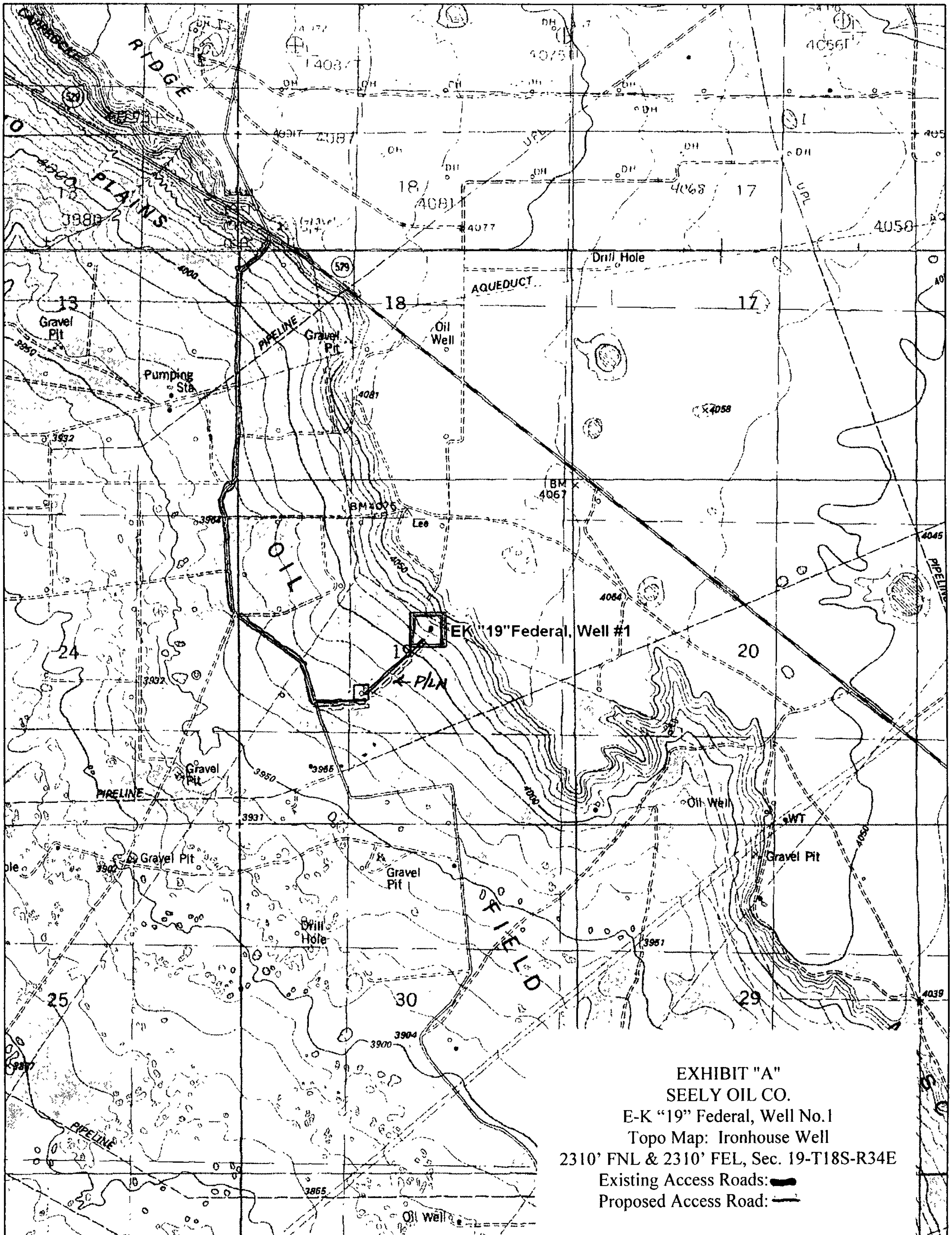
COUNTY OF TARRANT

This instrument was acknowledged before me on Dec. 21, 2009 by Charles W. Seely, Jr. of Seely Oil Company, acting on behalf of said corporation.

Signatory of notary: Melissa A Appleby

My commission expires: 2/20/11

MELISSA A. APPLEBY
Notary Public, State of Texas
My Commission Expires
February 20, 2011



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www.delorme.com

Scale 1 : 24,000
1" = 2000 ft

TN
MN
8.9°E

EXHIBIT "C"
SEELY OIL CO.
E-K "19" Federal, Well No. 1
2310' FNL & 2310' FEL, Sec. 19-T18S-R34E
Existing Wells

OCD copies

APPLICATION FOR DRILLING

SEELY OIL COMPANY
EK "19" Federal, Well No. 1
2310' FNL & 2310' FEL-Sec. 19-T18S-R34E
Lea County, New Mexico
Lease No.: NM-104699
(Development Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Seely Oil Company submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.

2. The estimated tops of geologic markers are as follows:

Rustler	1,725'	Penrose	4,700'
Top of Salt	1,890'	San Andres	5,040'
Base of Salt	3,,070'	Delaware	5,430'
Yates	3,230'	T.D.	6,100'
7-Rivers	3,708'		
Queen	4,435'		

3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water between 50' - 230'.
Oil: Possible in the Queen below 4,435' and Delaware below 5,430.
Gas: None expected.

4. **Proposed New Casing Program**:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	COLLAPSE DESIGN FACTOR	BURST DESIGN FACTOR	TENSION DESIGN FACTOR
12 1/4"	8 5/8"	24.0#	J-55	ST&C	1,750'	1.71	3.68	5.81
7 7/8"	5 1/2"	15.5	J-55	LT&C	6,100'	1.63	1.60	2.09

5. **Cement Program**

CASING	DEPTH	QUANTITY OF CEMENT	TOC	YEILD
8 5/8"	~~1710'~~ 1750	Lead=600 sx (35/65) Poz (Fly Ash):CL. C cmt +5% bwow Sodium Chloride + 0.25 lbs/sack Cello Flake+= 0.2% bwoc FL-52 +0.01 gps FP-6L+6% bwoc Bentonite +97.3% fresh water		1.90
		Tail= 200 sx CL "C" + 1% bwow Calcium Chloride + 56 2 % Fresh water	surface	1.33
5 1/2"	6,100'	Lead=310 sx 65% Howco Lite Premium Plus, 35% Poz A & 6% gek		1.85
		Tail=430 sx (50/50) Cl "C"/Poz + .75% CFR dispersant & 6lbm/sk salt	~~4000'~~	1.23

See COA

200' tie back

6. **Proposed Control Equipment: See Exhibit "E":**
   BOP Program:
   A 10" 3000 psi wp Shaffer Type E double gate hydraulic ram BOP, will be installed on the 8 5/8" casing. Casing and BOP will be tested as described in Onshore Order No. 2 before drilling out with 7 7/8". The pipe rams will be operated and checked daily, plus each time drill pipe is out of hole. This will be documented on driller's log. See Exhibit "E".

MUD PROGRAM		MUD WEIGHT	VIS.	W/L CONTROL
DEPTH	MUD			
0 – 1750'	Fresh water mud	8.9 - 9.4 ppg	32 - 34	No W/L control
1750'.-.5000'	Brine mud	9.8 - 10.2 ppg	34 - 35	No W/L control
5000' – 6100'	Cut Brine mud w/gel	9.8 - 10.2 ppg	34 - 35	W/L control 10cc +/-

8. **Auxiliary Equipment**: Blowout Preventer, gas detector, Kelly cock,.

9. **Testing, Logging, and Coring Program:**

See COA

Drill Stem Tests: None unless warranted.
Logging: T.D. to 1750': G/R-Density Neutron, Dual Induction Log
1750' to surface: G/R, Neutron
Coring: None planned unless warranted.

10. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered, the proposed mud program will be modified to increase the mud weight. Estimated (evac) BHP=2918 psi with surface pressure = 2276 psi (part. evac. hole) with BH temperature of 121°.

11. H_2S: None expected. None in previously drilled wells, but the Mud Log Unit will be cautioned to use a gas trap to detect H_2S and if any is detected the mud weight will be increased along with H_2S inhibitors sufficient to control the gas. If monitor approaches #10, will prepare to shut-in well and at #10 will shut-in well and install 150' of line from choke manifold to mud separator and flare.

12. Anticipated starting date: January 19, 2010.
    Anticipated completion of drilling operations: Approx. 3 – 5 wks

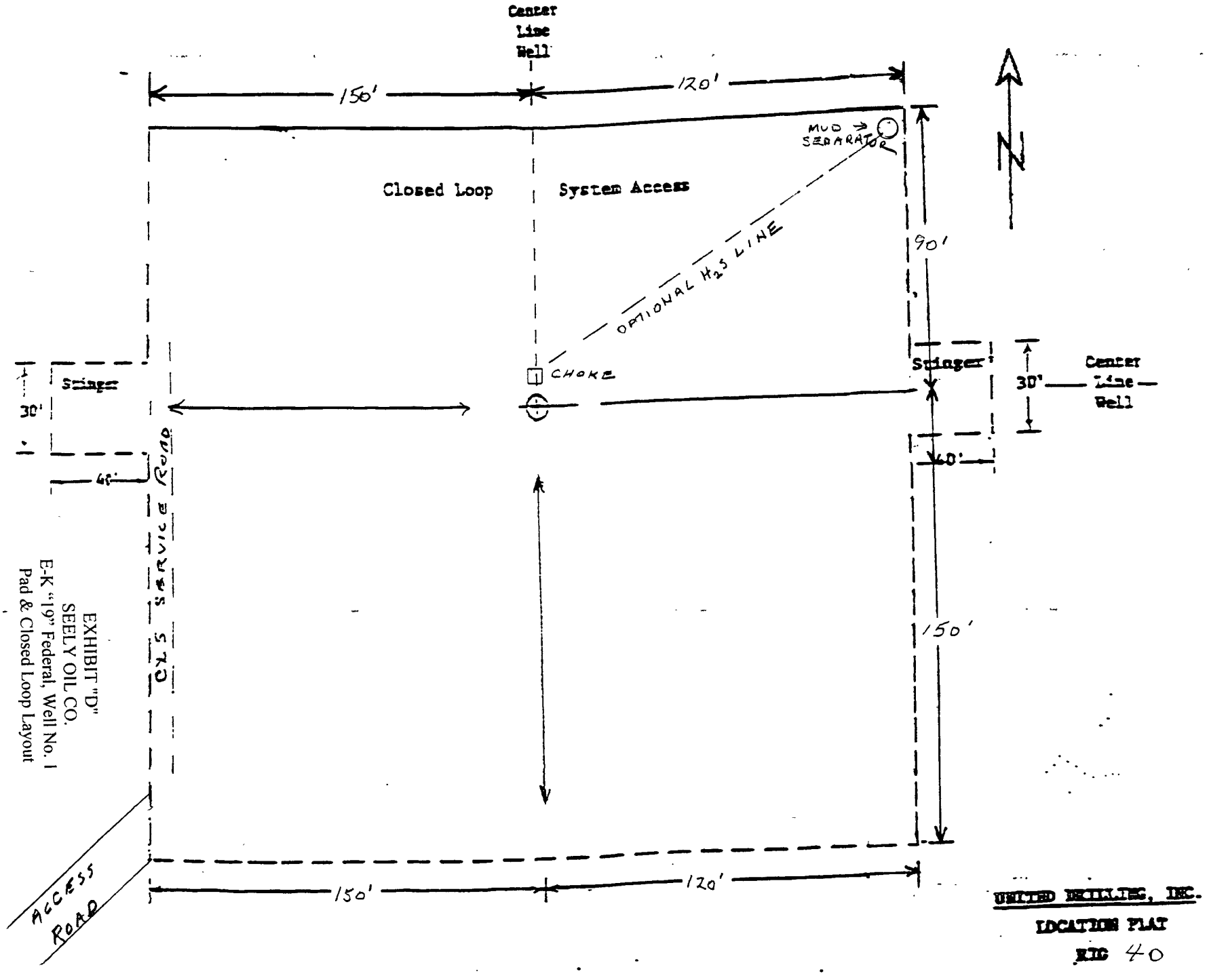


EXHIBIT "D"
SEELY OIL CO.
E-K "19" Federal, Well No. 1
Pad & Closed Loop Layout

UNITED DRILLING, INC.
LOCATION PLAT
RIG 40

BOP DIAGRAM
3000# SYSTEM

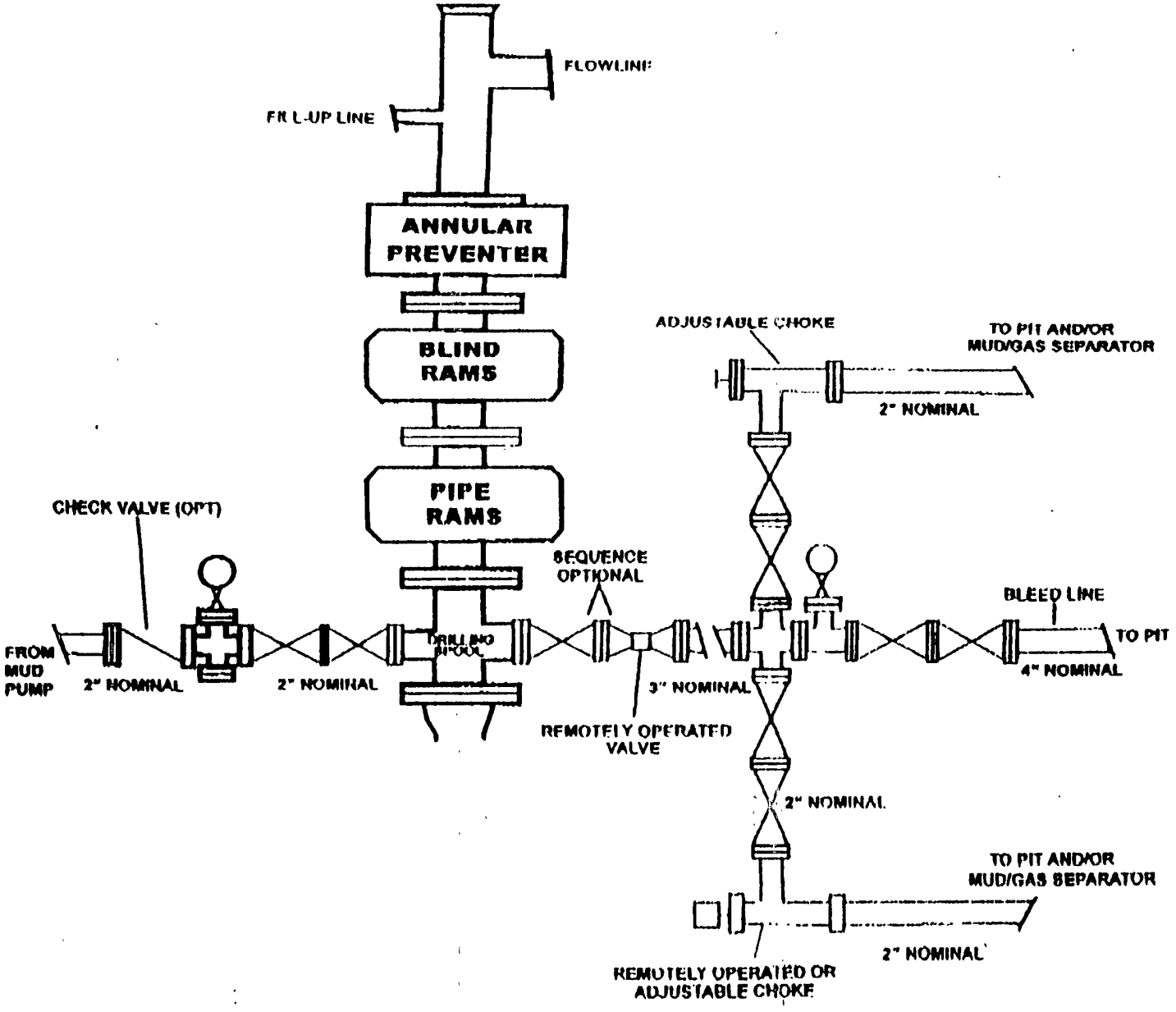


EXHIBIT "E"
SEELY OIL CO.
E-K "19" Federal, Well No. 1
BOP Specifications

2000# BOP manifold system

(Suggested configuration)

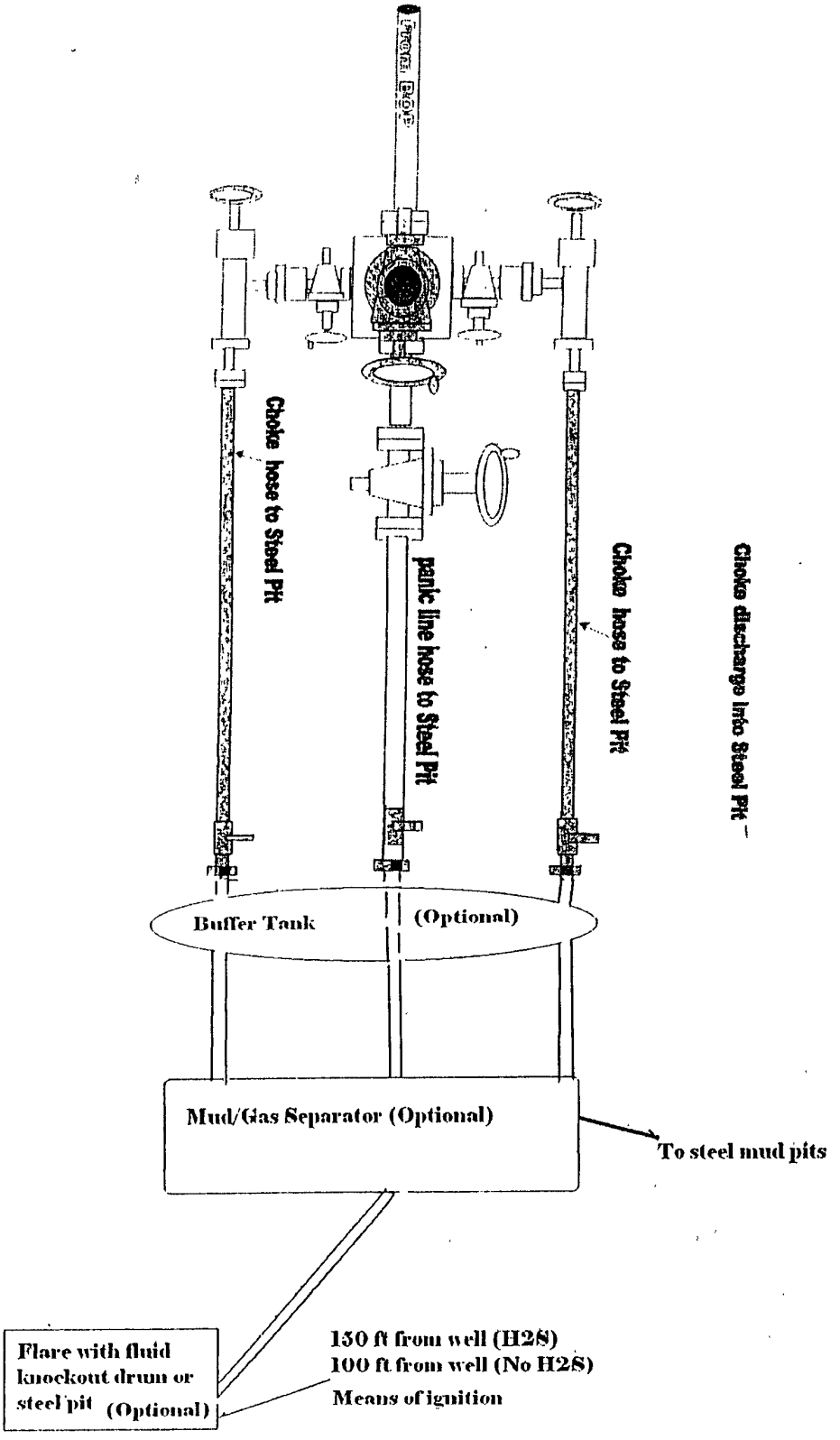


EXHIBIT "F"

Seely Oil Company

H_2S DRILLING OPERATIONS PLAN
For:
EK "19" Federal, Well No. 1
2310' FNL & 2310' FEL, Sec. 29-T18S-R34E
Lat.= 32.44'02.87" N---Long. = 103'35'55.10" W.
NAD 83 NME

I. HYDROGEN SULFIDE TRAINING

All key personnel whether regularly assigned, contracted or employed on an unscheduled basis will receive or represent that they have received training in accordance with the general training requirements outlined in the API RP49 for safe drilling of wells containing hydrogen sulfide, Section 2.

In addition, supervisory personnel will be trained in the following areas:

1. The corrective action and shut-in procedures when drilling or reworking a well, and blowout prevention in well control procedures.

2. The contents and requirements of the H_2S drilling operations plan.

II. H_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H_2S safety equipment and systems will be installed, tested and operational when drilling reaches a depth of 500' above the first zone containing or reasonably expected to contain 100 ppm or more hydrogen sulfide.

1. Well Control Equipment:

a. Choke manifold with a minimum of one choke.
b. Blind rams and pipe rams and pipe rams to accommodate all drill pipe sizes with a properly sized closing unit.

2. Protective Equipment:

a. Proper protective breathing apparatus shall be readily accessible to all essential personnel on the drill site.

3. H_2S and Monitoring Equipment:

a. Three portable H_2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens.

4. Visual Warning Systems:

a. Wind direction indicators as shown on well site diagram.
b. Caution/Danger signs shall be posted on roads providing direct access to location.

5. **Mud Program:**

   a. The mud program has been designed to minimize the volume of H_2S circulated to the surface. Proper mud weight and safe drilling practices will minimize hazards when penetrating possible H_2S bearing zones.

6. **Communications:**

   a. EMERGENCY PHONE NUMBERS
      See attached Contingency Plan for a list of Phone Contacts on H_2S problems.

7. **Well Testing:**

   a. Drillstem testing, if required, will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. When drillstem testing intervals known to or reasonably expected to contain 100 ppm or more H_2S, the drillstem test will be conducted during daylight hours and formation fluids will not be flowed to the surface.

HYDROGEN SULFIDE (H_2S) CONTINGENCY PLAN

Assumed 100 ppm ROE = 3000'

100 ppm H_2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- **Isolate the area and prevent entry by other persons into the 100 ppm ROE.**
- **Evacuate any public places encompassed by the 100 ppm ROE.**
- **Be equipped with H_2S monitors and air packs in order to control the release.**
- **Use the "buddy system" to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
  - **Detection of H_2S, and**
  - **Measures for protection against the gas,**
  - **Equipment used for protection and emergency response.**

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 = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

Seely Oil Company 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. Lime Rock Resources response must be in coordination with the State of New México's "Hazardous Materials Emergency Response Plan" (HMER).

H_2S CONTINGENCY PLAN EMERGENCY CONTACTS

Company Office –Seely Oil Company	817-332-1377
Answering Service (During Non-Office Hours)	817-992-1737

Key Personnel

Name	Title	Phone Number
David Henderson	Production Engineer	817-332-1377 Cell: 817-992-1737
Mike Frazier	Production Supervisor	575-390-2171 Cell

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

Carlsbad

Ambulance	911
State Police	575-8885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
24 Hour	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635
National Emergency Response Center (Washington, DC)	800-424-8802

Other

Boots & Coots IWC	800-256-9688 or 281-931-8884
Cudd PressureControl	915-699-0139 or 915-563-3356
Halliburton	575-746-2757
B. J. Services	575-746-3569
Flight For Life – 4000 24th St. Lubbock, Texas	806-743-9911
Aerocare – R3, Box 49F, Lubbock, Texas	806-747-8923
Med Flight Air Amb – 2301 Yale Blvd SE #D3, Albuq., NM	505-842-4433
S B Air Med Service – 2505 Clark Carr Loop SE, Albuq., NM	505-842-4949

SEELY OIL CO.
EK "19" Federal, Well No. 1

CERTIFICATION:

I hereby certify that I have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Seely Oil Co. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

December 18, 2009

George R. Smith
Agent for: Seely Oil Co.

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	SEELY OIL COMPANY
LEASE NO.:	NM104699
WELL NAME & NO.:	EK 19 FEDERAL #1
SURFACE HOLE FOOTAGE:	2310' FNL & 2310' FEL
BOTTOM HOLE FOOTAGE	' F L & ' F L
LOCATION:	Section 19, T. 18 S., R 34 E., NMPM
COUNTY:	Lea County, New Mexico

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)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Hobbs Field Station at (575) 393-3612 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. V-DOOR DIRECTION: East

C. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil will be used for interim and final reclamation.

D. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

E. FEDERAL MINERAL MATERIALS PIT

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

F. 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.

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 thirty (30) 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.

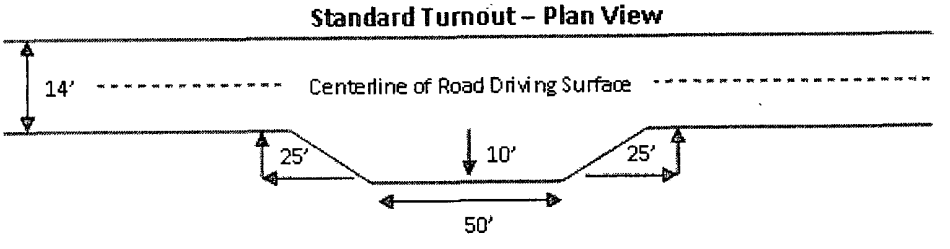
Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

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 the uphill side of the road.

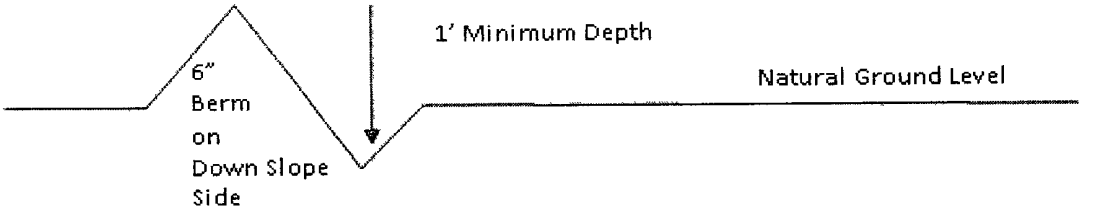
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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:

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

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(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 cattleguard(s) that are in place and are utilized during lease operations.

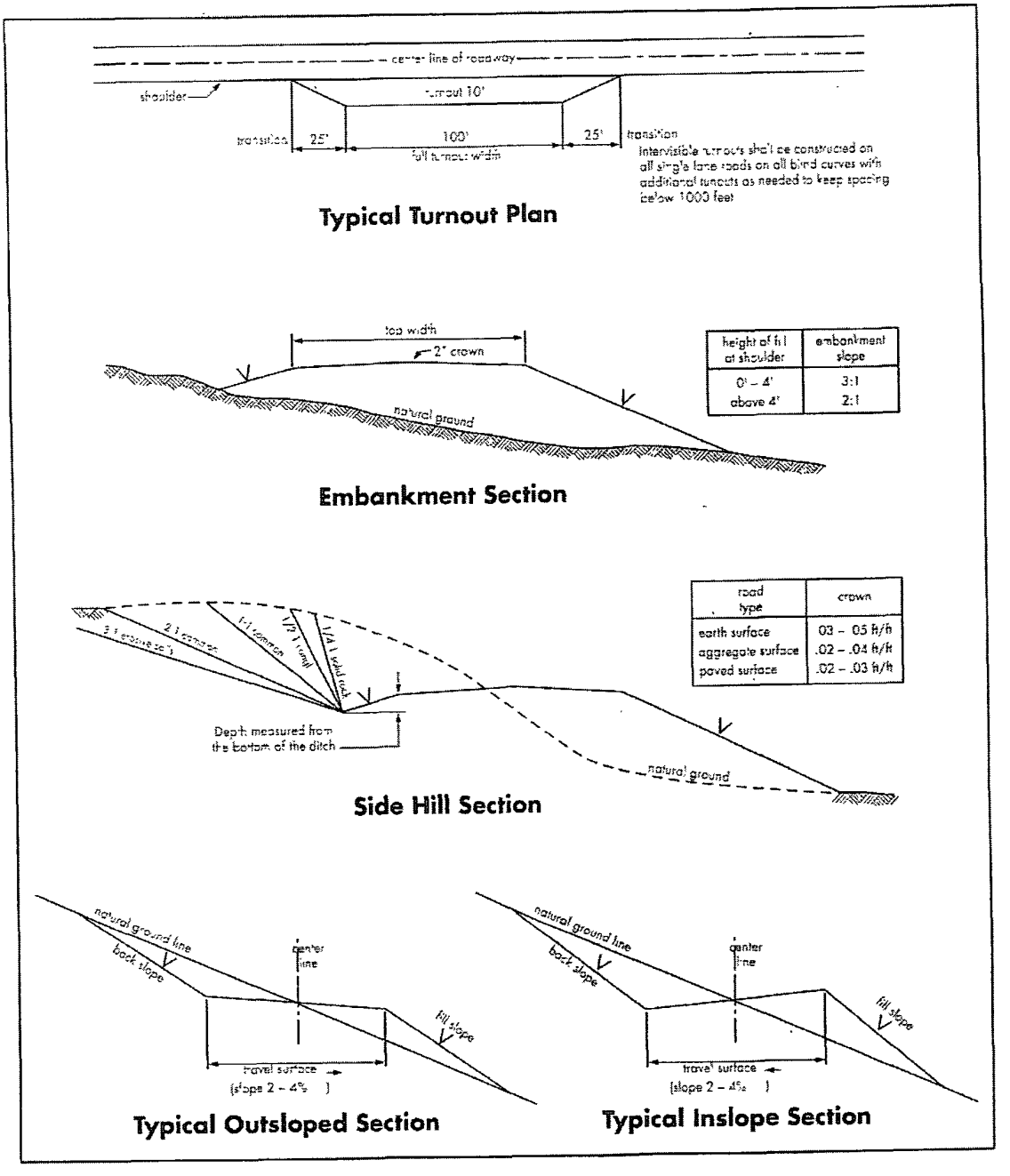
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
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.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

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

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Queen** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please 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.

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

4. **The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will 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 and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

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

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

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

Possible lost circulation in the Grayburg and San Andres Formation.
Possible water and brine flows in the Salado and Artesia Group.

1. The **8-5/8** inch surface casing shall be set at **approximately 1,750 feet (a minimum of 25 feet 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 a 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 should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

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 RP 53 Sec. 17.

2. 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.

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

    a. Casing cut-off and BOP installation will not be initiated until the cement has had 4-6 hours of setup time in a water basin and 12 hours in the potash areas. This time will start after the cement plug is bumped. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.

    b. The tests shall be done by an independent service company utilizing a test plug.

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

    d. 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.**

    e. 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.

D. DRILL STEM TEST

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

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VIII. 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.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, 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
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. 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).

X. 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).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

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 see 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