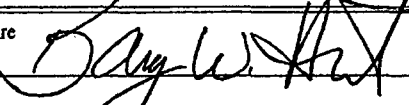
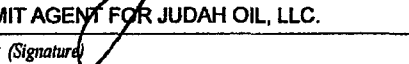


UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
APPLICATION FOR PERMIT TO DRILL OR REENTERFORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014

1a. Type of work: <input type="checkbox"/> DRILL <input checked="" type="checkbox"/> REENTER		5. Lease Serial No. LC-067145	
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator JUDAH OIL, LLC.		7. If Unit or CA Agreement, Name and No.	
3a. Address P. O. BOX 870 (1805 W. JACOBS AVE) ARTESIA, NM 88211-0870		8. Lease Name and Well No. PRONGHORN FEDERAL SWD #1	
3b. Phone No. (include area code) (575) 748-4370 (James Campanella)		9. API Well No. 30-015-20866	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 1980 FSL & 660 FEL (RE-ENTER BIG EDDY UNIT #36 FOR SWD WELL) At proposed prod. zone SAME		10. Field and Pool, or Exploratory DEVONIAN	
14. Distance in miles and direction from nearest town or post office* 9 MILES NORTHEAST OF CARLSBAD, NM		12. County or Parish EDDY	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'	16. No. of acres in lease 1320	17. Spacing Unit dedicated to this well	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 13,200'	19. Proposed Depth TD: 14,750'	20. BLM/BIA Bond No. on file NMB-000451	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3360.2' GL	22. Approximate date work will start* ASAP	23. Estimated duration 55 DAYS	
24. Attachments			

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must 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 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 required by the BLM.

25. Signature 	Name (Printed/Typed) BARRY W. HUNT	Date 1/10/17
Title PERMIT AGENT FOR JUDAH OIL, LLC.		
Approved by (Signature) 	Name (Printed/Typed)	Date
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.

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.

(Continued on page 2)

\*(Instructions on page 2)

Witness CIT NM OIL CONSERVATION  
ARTESIA DISTRICT  
FEB 18 2017

CAPITAN CONTROLLED WATER BASIN

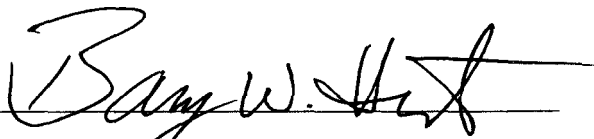
RWP 2-14-2017  
Accepted for record - NMOCDAPPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHEDSEE ATTACHED FOR  
CONDITIONS OF APPROVAL



## CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently 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 Judah Oil, LLC. am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 4th. day of December 2014.

Signed: \_\_\_\_\_

A handwritten signature in black ink, appearing to read "Barry W. Hunt", written over a horizontal line.

Printed Name: Barry Hunt

Position: Agent for Judah Oil, LLC.

Address: 1403 Springs Farm Place, Carlsbad, NM 88220

Telephone: (575) 361-4078

E-mail: specialtpermitting@gmail.com



DISTRICT I  
1825 N. FRENCH DR., HOBBS, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II  
811 S. FIRST ST., ARTESIA, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III  
1000 RIO BRAZOS RD., AZTEC, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number <b>30-15-20866</b>	Pool Code <b>96101</b>	Pool Name <b>SWD; Devonian</b>
Property Code <b>317420</b>	Property Name <b>PRONGHORN FED SWD</b>	Well Number <b>1</b>
OGRID No. <b>245872</b>	Operator Name <b>JUDAH OIL, LLC</b>	Elevation <b>3360.2</b>


**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	12	21-S	28-E		1980	SOUTH	660	EAST	EDDY

**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.						

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

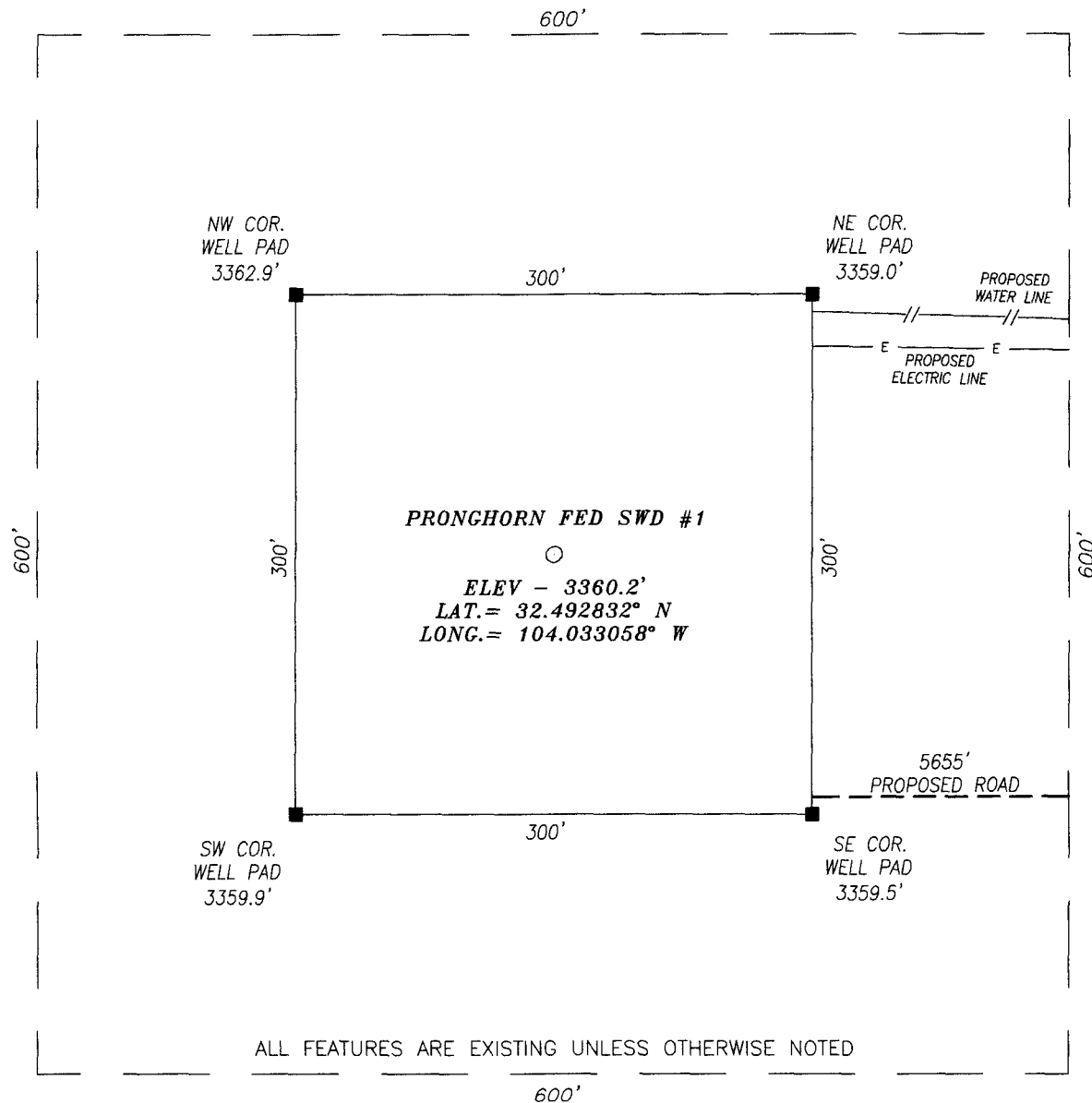
<div>NAD 27 SURFACE LOCATION Y=543135.3 N X=592582.6 E LAT.=32.492832° N LONG.=104.033058° W</div> <div>S.L.O. 660' 1980'</div>	<b>OPERATOR CERTIFICATION</b> <i>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> <div>Signature: <i>Barry W. Hunt</i> Date: <i>12/5/14</i> Printed Name: <i>Barry W. Hunt</i></div>
	<b>SURVEYOR CERTIFICATION</b> <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i> OCTOBER 24, 2014 Date of Survey Signature & Seal of Professional Surveyor <div> <i>Chad L. Harcrow</i> 11/4/14 Certificate No. CHAD HARCROW 17777 W.O. # 14-936 DRAWN BY: AD</div>



# SECTION 12, TOWNSHIP 21 SOUTH, RANGE 28 EAST, N.M.P.M.,

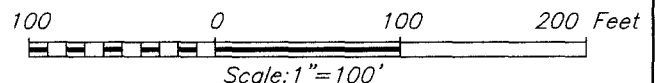
EDDY COUNTY

NEW MEXICO



## DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF HWY 62/180 AND CR #699 (LANDFILL RD.) GO APPROX. 1.9 MILE NORTHEAST ALONG HWY 62/180; THEN TURN RIGHT (SOUTH) ONTO A CALICHE LEASE RD. AND GO APPROX. 0.35 MILE; THEN TURN LEFT (SOUTHEAST) AND FOLLOW MEANDERING RD. APPROX. 1.65 MILES; THEN PROPOSED WELL IS APPROX. 4710 FEET SOUTH.



**HARCROW SURVEYING, LLC**  
 2314 W. MAIN ST, ARTESIA, N.M. 88210  
 PH: (575) 746-2158 FAX: (575) 746-2158  
 c.harcrow@harcrowsurveying.com



**JUDAH OIL, LLC**

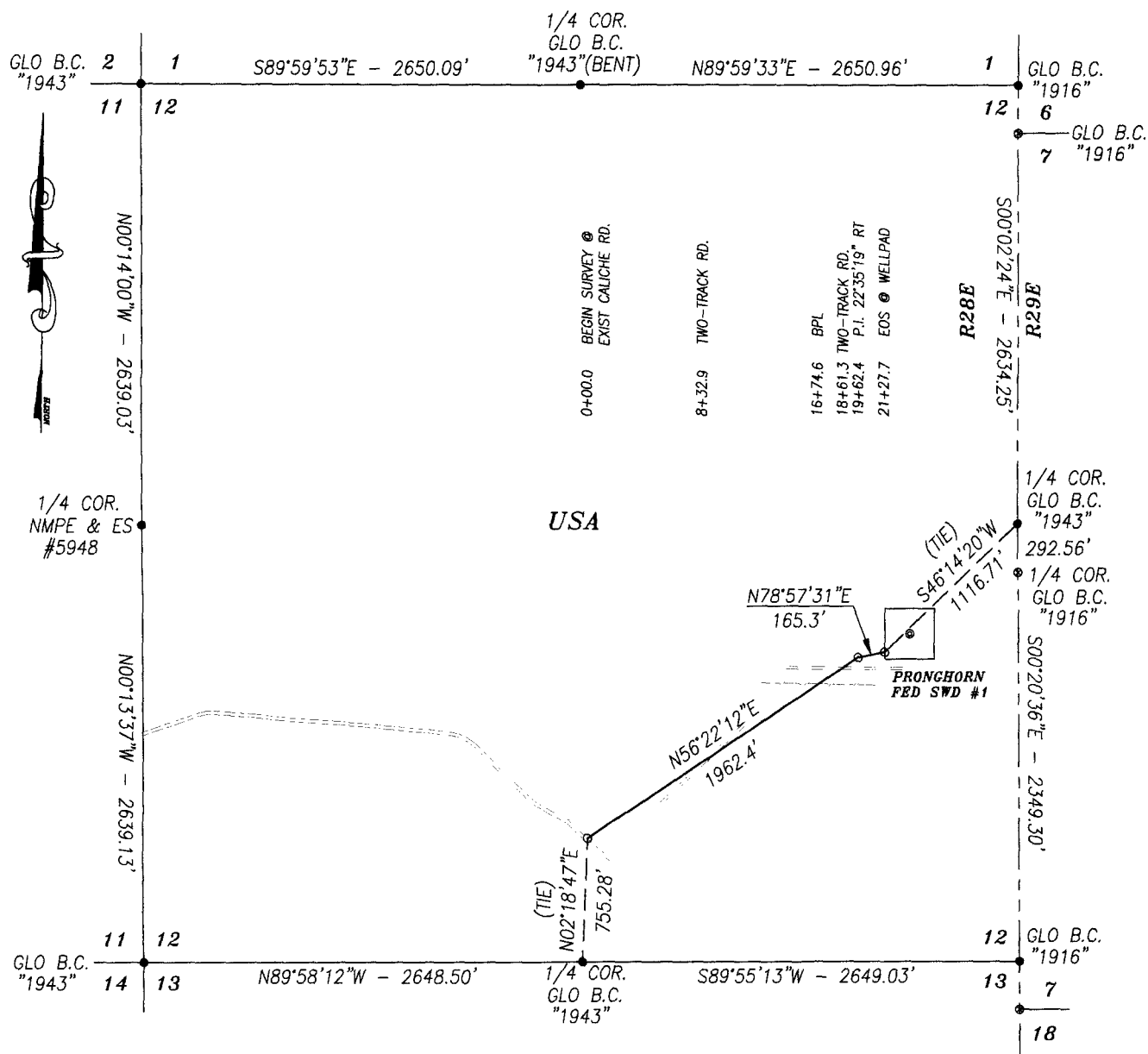
**PRONGHORN FED SWD#1 WELL**  
 LOCATED 1980 FEET FROM THE SOUTH LINE  
 AND 660 FEET FROM THE EAST LINE OF SECTION 12,  
 TOWNSHIP 21 SOUTH, RANGE 28 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO

SURVEY DATE: 10/24/2014	PAGE: 1 OF 1
DRAFTING DATE: 11/4/2014	
APPROVED BY: CH	DRAWN BY: AD FILE: 14-936



**PRONGHORN SWD #1: ROAD 2  
JUDAH OIL, LLC.**

A PROPOSED ROAD FROM AN EXISTING ROAD TO THE PRONGHORN FED SWD #1  
**SECTION 12, TOWNSHIP 21 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
EDDY COUNTY, NEW MEXICO.



**DESCRIPTION**

A STRIP OF LAND 30.0 FEET WIDE AND BEING 2127.7 FEET OR 128.95 RODS OR 0.403 MILES IN LENGTH, CROSSING USA LAND IN SECTION 12, TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPE, EDDY COUNTY, NEW MEXICO AND BEING 15 FEET LEFT AND 15 FEET RIGHT OF PLATTED CENTERLINE SURVEY.

**BASIS OF BEARING:**

BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

**HARCROW SURVEYING, LLC**

2314 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158 FAX: (575) 746-2158

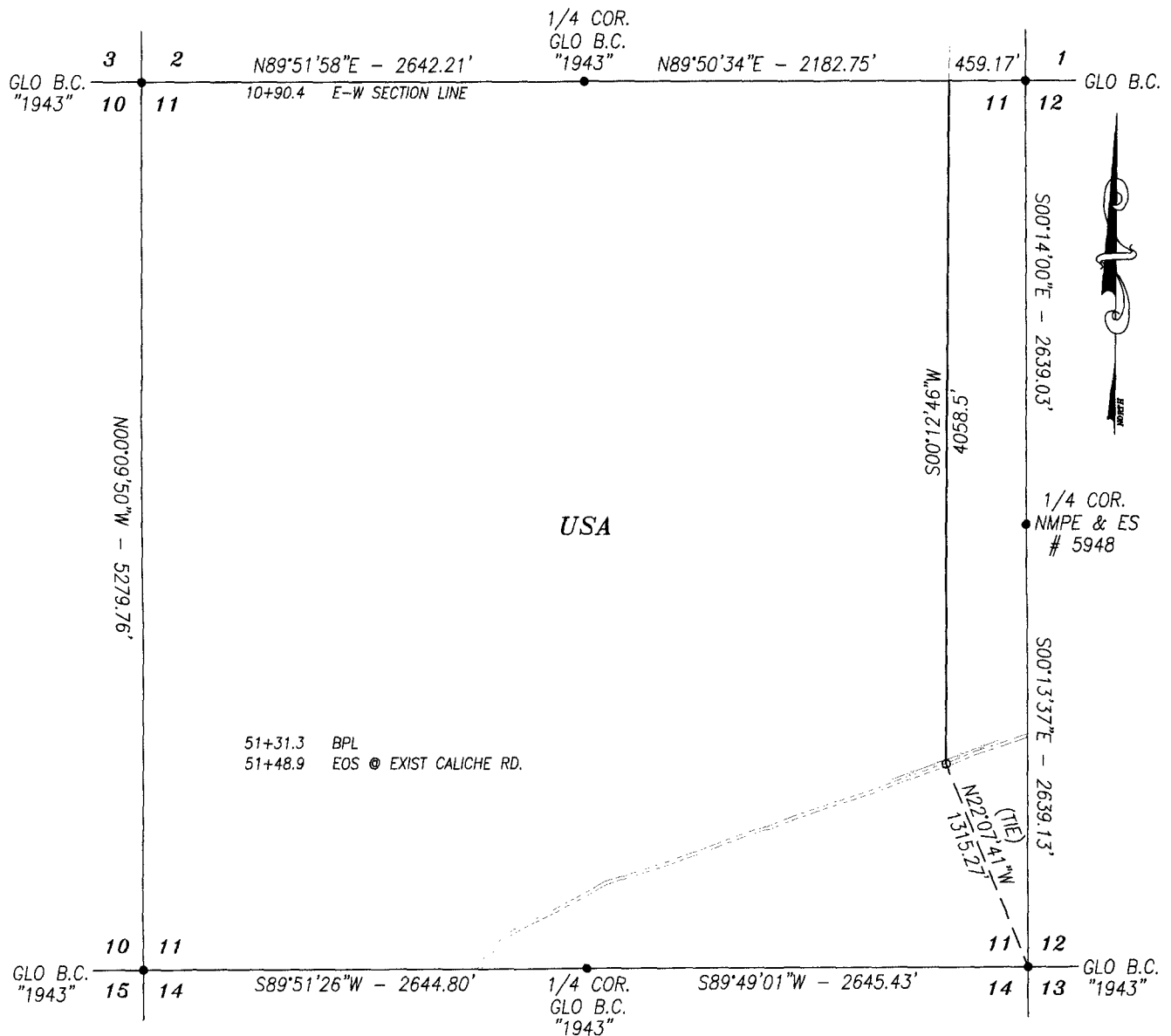
[charcrow@harcrowsurveying.com](mailto:charcrow@harcrowsurveying.com)





**PRONGHORN SWD #1 ROAD 1  
JUDAH OIL, LLC.**

A PROPOSED ROAD FROM AN EXISTING ROAD TO ANOTHER EXISTING ROAD  
**SECTION 11, TOWNSHIP 21 SOUTH, RANGE 28 EAST, N.M.P.M.,**  
EDDY COUNTY, NEW MEXICO.



**DESCRIPTION**

A STRIP OF LAND 30.0 FEET WIDE AND BEING 4058.5 FEET OR 245.97 RODS OR 0.769 MILES IN LENGTH, CROSSING USA LAND IN SECTION 11, TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPE, EDDY COUNTY, NEW MEXICO AND BEING 15 FEET LEFT AND 15 FEET RIGHT OF PLATTED CENTERLINE SURVEY.

**BASIS OF BEARING:**

BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

**HARCROW SURVEYING, LLC**

2314 W. MAIN ST, ARTESIA, N.M. 88210

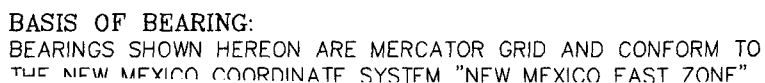
PH: (575) 746-2158 FAX: (575) 746-2158

[charcrow@harcrowsurveying.com](mailto:charcrow@harcrowsurveying.com)





A PROPOSED ROAD FROM AN EXISTING ROAD TO ANOTHER EXISTING ROAD  
SECTION 2, TOWNSHIP 21 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



2314 W. MAIN ST, ARTESIA, N.M. 88210  
PH· (575) 746-2158 FAX· (575) 746-2158





T 20 S

T 21 S

R 28 E

R 29 E

62  
180

62  
180

02

01

05

LANDFIELD CR 500

ROAD 1

10

11

12

07

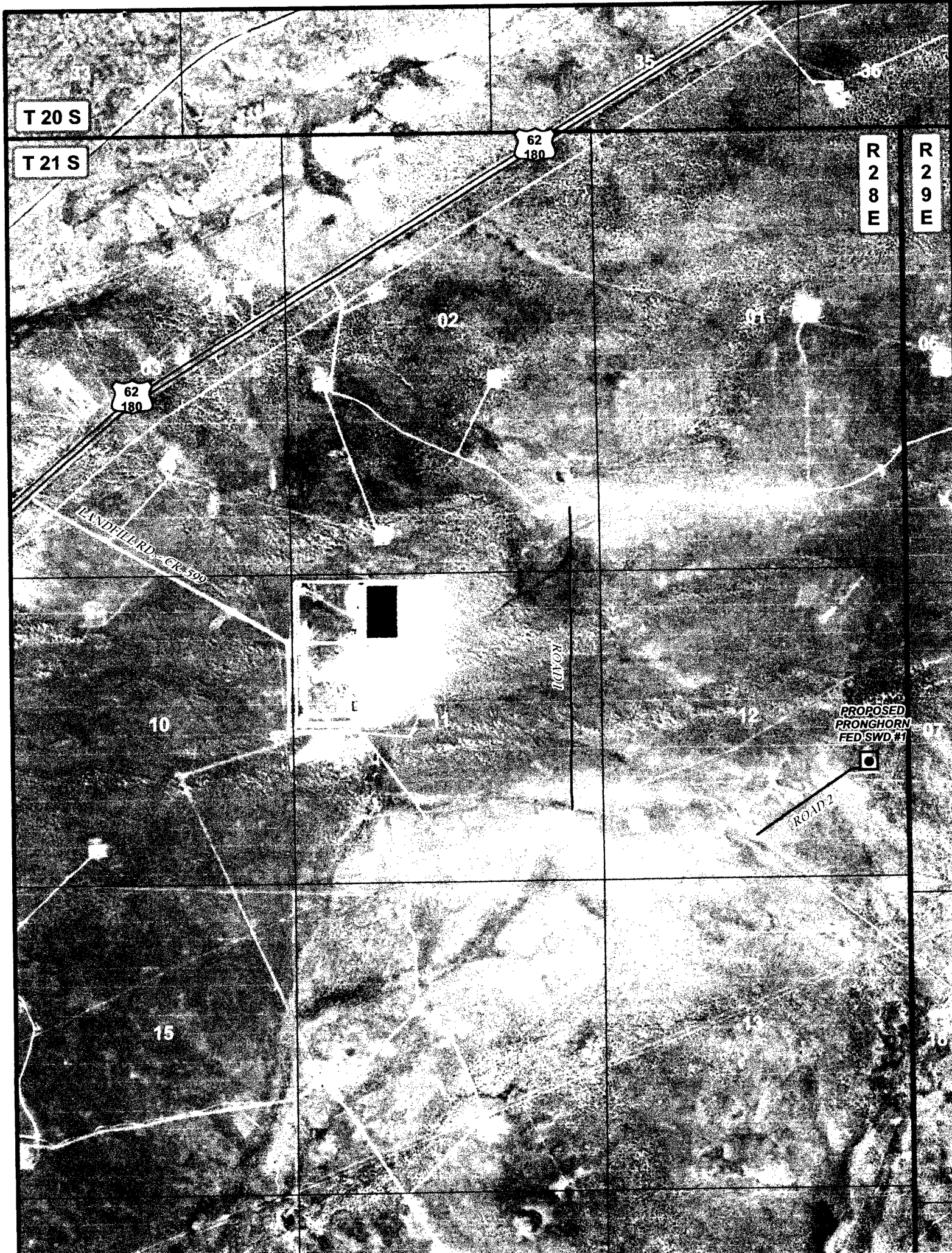
PROPOSED  
PRONGHORN  
FED SWD #1

ROAD 2

15

13

16





T 20 S

T 21 S

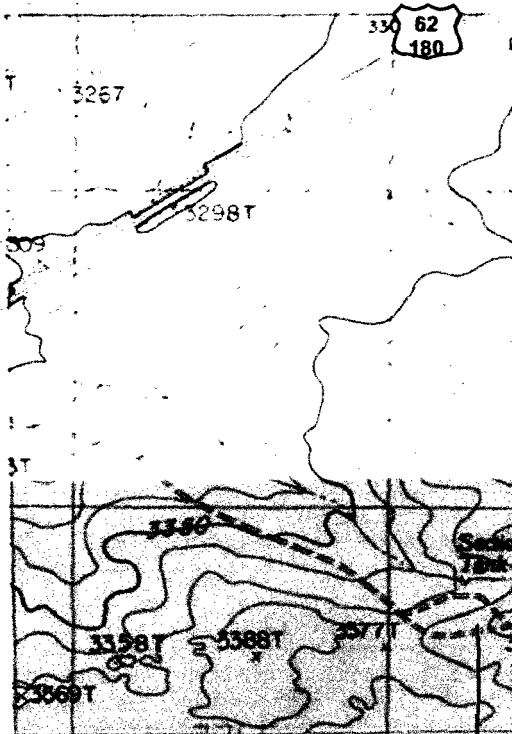
R 28 E

R 29 E



LANDFILL RD. - CR. 599

Sand  
Point



ROAD 1

PROPOSED  
PRONGHORN  
FED SWD #1

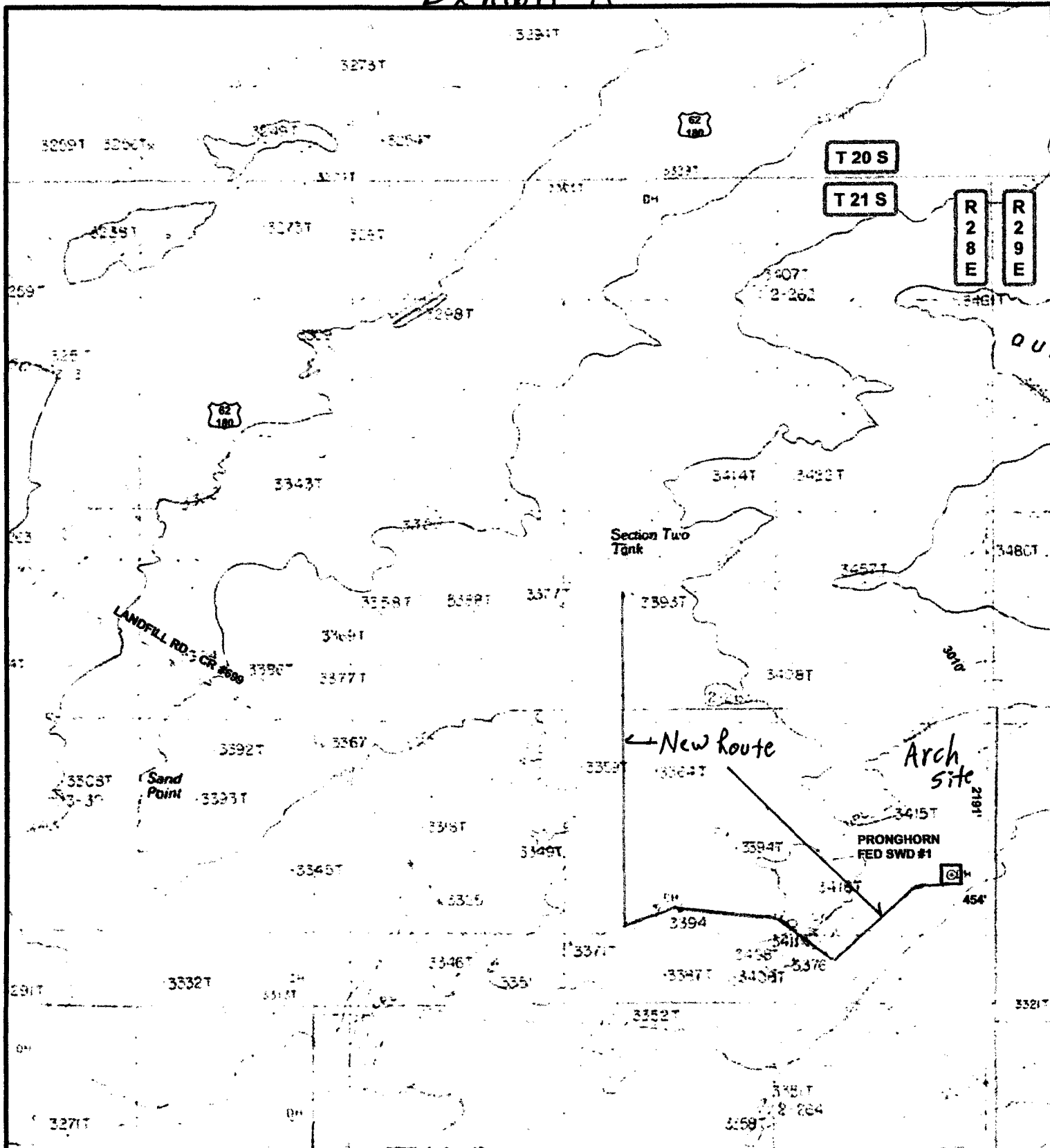
ROAD 2







# Exhibit A



## LEGEND

○ WELL

□ WELLPAD

— EXISTING ROAD

— PROPOSED ROAD

## PRONGHORN FED SWD #1

SEC: 12 TWP: 21 S. RGE: 28 E. ELEVATION: 3360.2'

STATE: NEW MEXICO COUNTY: EDDY 1980' FSL & 660' FEL

W.O. # 14-936 LEASE: PRONGHORN FED SWD SURVEY: N.M.P.M.

0 2,500 5,000 FEET

0 0.125 0.25 0.5 Miles 1 IN = 2,000 FT

LOCATION MAP

TOPO

11/04/2014

S.P.

JUDAH  
OIL LLC.



HARCROW SURVEYING, LLC.  
2314 W. MAIN ST, ARTESIA, NM 88210  
PH: (575) 513-2570 FAX: (575) 746-2158  
chad\_harcrow77@yahoo.com



DRILLING PLAN:  
SWD WELL  
JUDAH OIL, LLC.  
PRONGHORN FEDERAL SWD #1  
(RE-ENTRY of BIG EDDY UNIT #36)  
1980' FSL & 1980' FWL, SECTION 20, T19S, R32E  
Lea County, NM

**1. GEOLOGIC NAME OF SURFACE FORMATION:**

A. Recent Permian with quaternary alluvium and other surficial deposits.

**2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:**

Formation	Well Depth	Water / Oil / Gas
Rustler	534'	
Top of Salt	957'	Salt
Base of Salt	1607'	Salt
Capitan Reef	1913'	Water
Delaware	3017'	Hydrocarbon
Bone Spring	6547'	Hydrocarbon
Wolfcamp	10072'	Hydrocarbon
Morrow	11782'	Hydrocarbon
Barnett	13000'	Hydrocarbon
Lower Miss	13150'	Hydrocarbon
Woodford	13600'	Hydrocarbon
Devonian (Target)	13750'	Hydrocarbon
TD	14750'	

Water : Surface water between 78' – 150' behind casing.

This project will involve re-entering the plugged and abandoned Big Eddy Unit #36, Morrow well, drilling out cement plugs with pulling unit, rig up drilling rig, drilling to Devonian. Run 8" reamer to TD, circulate hole and run 5 1/2" new casing with DV tool at 8000'. Rig down drilling rig and MI PU to run 4" Du-O-Lined HC P-110 injection string with 5 1/2" Stainless steel Airset Packer @ 13,760', w/ SS O/O tool. Open hole from 13,760' to 14,750'.

**3. CASING PROGRAM: EXISTING IN WELL**

Hole Size	Depth	Casing Size	Weight	Joint	Grade	New/Used	SF Burst	SF Collapse	SF Tension (1000lb)
15"	0' -475'	11 3/4"	42#	STC	H-40	New	1.980	1.070	3.07
11"	0' -2982'	8-5/8"	24#	STC	K-55	New	2.950	1.370	2.63
			28#	STC	H-40	New	1.410	1.640	2.33



**NEW CASING:**

5 1/2" 0' – 4,000' 20# P-110 LT&C Collapse=11,100#, Burst=12,640#.

5 1/2" 4,000' – 13,680' 20# P-110 LT&C Collapse=8,830#, Burst=9190#.

5 1/2" 13,680' – 13,760' 20# P-110 LT&C

**4. CEMENT PROGRAM: EXISTING**

- A. Surface Casing: Existing. 11 3/4", 42#, @475' cmtnd w 450 sx Cl "C" + 2% CaCL+ .5 lb Floccel per sack mixed at 14.0 ppg, yield 1.53 cuft/sx.  
TOC: circ to surface.
- B. Intermediate Casing: Existing. 8 5/8", 24# & 28#, @ 2982' cmtnd w 1125 sx class C containing 24.5 # salt per sack and 1% CaCl at 14.7 ppg, yield of 1.68 cf/sk followed by 250 sks Class C with 2% CaCl at 14.0 ppg. yield 1.53 cf/sk. TOC: circ to surface.

**NEW CEMENT PROGRAM: NEW 5 1/2"**

**1<sup>ST</sup> Stage 13,760' – 8,000'**

Lead: 420 sks 35/65 P/H + 5% PF 44 (BWOW) Salt) + 6% PF 20 (Bentonite Gel) + 0.2% PF 153 (Anti Settling Agent) + 0.2% PF 13 (Retarder) + 0.125#/sk PF 29 (Celloflake) + 0.4 #/sk PF 45 (Defoamer) + 3 #/sk PF 42 (Kolseal). Density 12.6 Yield 2.06 H2O 10.975

Tail: 290 sks 50/50 P/H + 5% PF 44 (BWOW) (Salt) + 2% PF 20 (Bentonite Gel) + 0.7% PF 606 (Fluid Loss) + 0.1% PF 153 (Anti Settling Agent) + 0.2% PF 65 (Dispersant) + 0.1% PF 813 (Retarder) + 0.4#/sk PF 45 (Defoamer). Density 14.2 Yield 1.35 H2O 6.107.

DV TOOL AT 8,000'

**2<sup>nd</sup> Stage 8,000' – Surface**

Lead: 600 sks 50/50 P/H + 5% PF 44 (BWOW) (Salt) + 10% PF 20 (Bentonite Gel) + 0.4% PF 153 (Anti Settling Agent) + 0.125#/sk PF 29 (Celloflake) + 0.4#/sk PF 45 (Defoamer) + 3#/sk PF 42 (Kolseal). Density 11.9 Yield 2.47 H2O 13.845

Tail: 200 sks H+0.2% PF 13 (Retarder). Density 15.6 Yield 1.18 H2O 5.235.

**5. PRESSURE CONTROL EQUIPMENT:**

The blow out preventer equipment (BOP) for this well consists of a 13 5/8" <sup>10M</sup> ~~5M~~ double ram with annular preventer BOP (<sup>13,000</sup> ~~7,000~~ psi WP) with choke manifold. The BOP will be installed on the 11 3/4" casing and utilized for deepening. Casing and BOP will be tested as described in Onshore Order No. 2. The pipe rams will be operated and checked daily. This will be documented on drillers log. (See Exhibit #1).

upgraded to 10M BOP system per Barry Hunt  
1/12/17



## 6. PROPOSED MUD CIRCULATION SYSTEM

Depth MD/TVD (ft)	Mud Type	Mud Density (ppg)	Viscosity (sec/1000cc)	Plastic Viscosity (cp)	Yield Point (lb/1000ft)	API Fluid Loss (cc)	pH	LGS %
0-3031'	Cut Brine	8.4-8.9	28-30	0-1	0-1	NC	9-9.5	<6
3031'-8260'	Brine Water	10.0-10.1	29-30	0-1	0-1	NC	9.5-10.0	<6
8260'-13760'	Existing Brine to New Zan D/White Starch/Barite	10.01-11.5	36-44	6-14	12-18	10-12	9.5-10.0	<6
13760'-14750'	Cut Brine	8.4-8.9	28-30	0-1	0-1	NC	9-9.5	<6

If needed, the necessary mud products for weight addition and fluid loss control will be on location at all times. Electronic pit monitoring equipment will be utilized.

## 7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location.

## 8. LOGGING, CORING AND TESTING PROGRAM:

Drill Stem Tests : None.  
Logging: Bond Log was previously run.  
Coring: None.  
Will ML. New drill formation to determine formation tops

## 9. ABNORMAL PRESSURES AND TEMPERATURES / POTENTIAL HAZARDS:

None anticipated. In the event abnormal pressures are encountered, the proposed mud program will be modified to increase the mud weight. Max bottom hole pressure should not exceed 6292 psi with BHT of 198 F anticipated.

H2S: None expected. None in the previously drilled well, but the Mud Log Unit will be cautioned to use a gas trap to detect H2S and if any is detected the mud weight will be increased along with H2S inhibitors sufficient to control the gas. The well will be shut down until a mud separator and flare line can be installed on the choke manifold, if the gas monitor approaches 10.

The operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment.

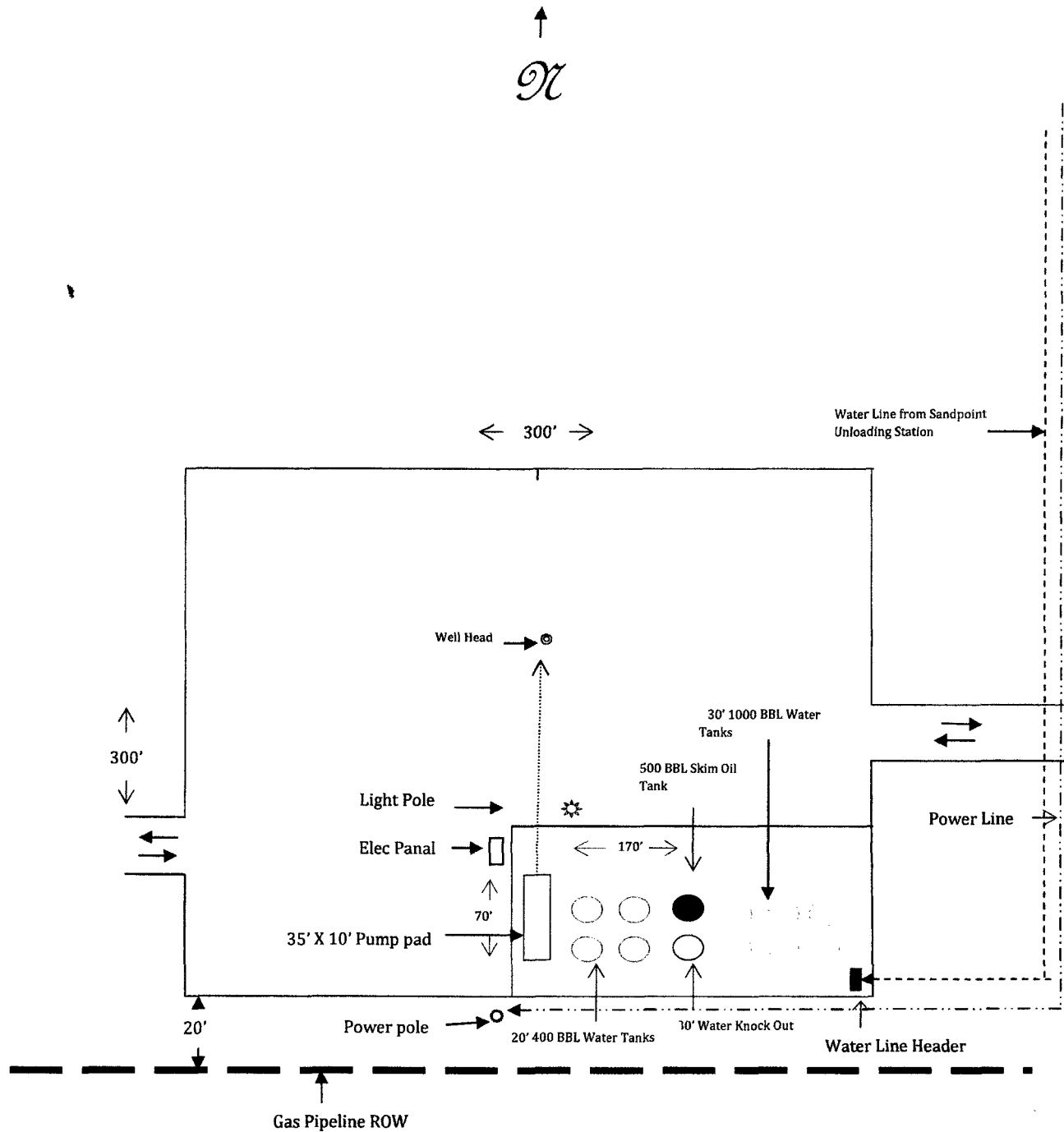
## 10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

A. Road and location construction will begin after BLM has approved APD. Anticipated spud date will be as soon after BLM approval and as soon as rig will be available. Move in operations and drilling is expected to take 55 days. An additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.



# Exhibit E-1

## Sight Facility Diagram



### Pronghorn SWD, LLC

Pronghorn Fed SWD #1

API#30-015-20866

UL-1 1980 FSL 660 FEL Section 12

T-21-S, R-28-E Eddy County NM



Exhibit "A"

Judah Oil, LLC  
Big Eddy Unit #36  
API # 30-015-20866  
1980 FSL X 660 FEL  
Unit Letter "I", Section 12, T21S, R28E  
Eddy County, New Mexico  
Spud 06/02/1973 as Morrow Test  
Plugged and Abandoned 07/25/1973

Current Wellbore  
Drawing not to scale

ELEV KB:3335'  
ELEV GL:3324'

ALL DEPTHS ARE KB

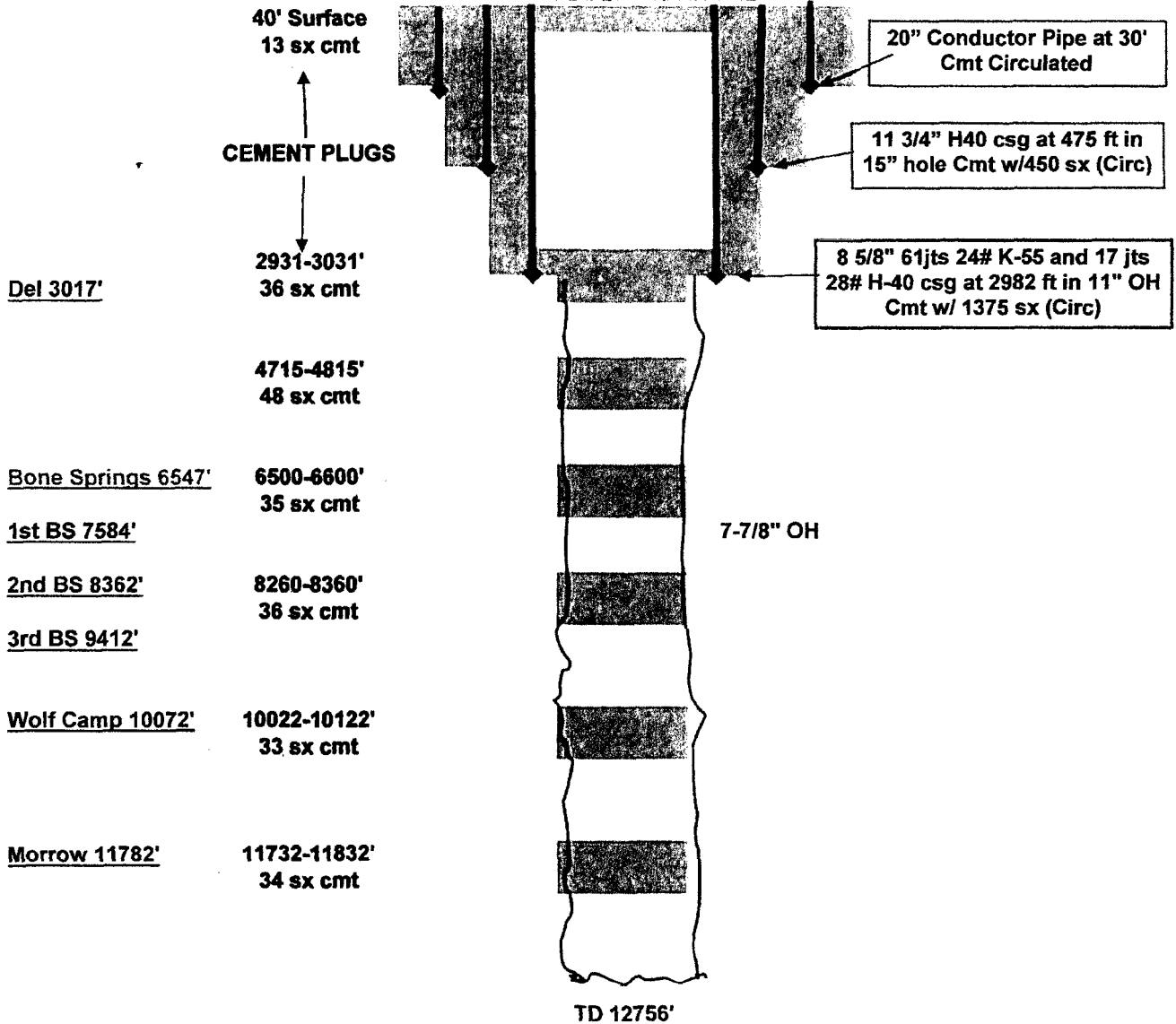


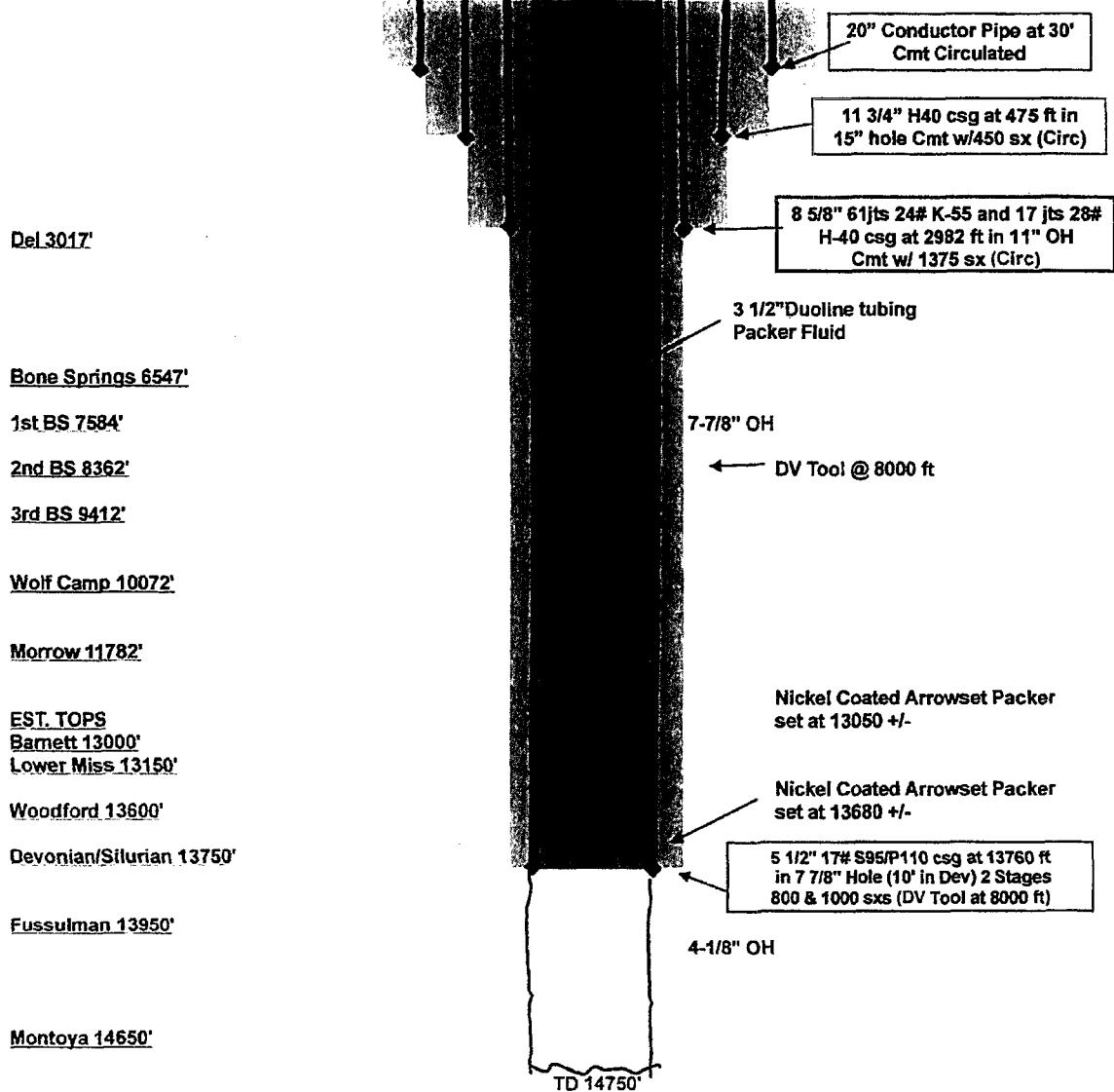


Exhibit "A"

Judah Oil, LLC  
Pronghorn Fed SWD # 1  
API # 30-015-20866  
1980 FSL X 660 FEL  
Unit Letter "I", Section 12, T21S, R28E  
Eddy County, New Mexico  
Spud 06/02/1973 as Morrow Test  
Plugged and Abandoned 07/25/1973  
Proposed Wellbore  
Drawing not to scale

ELEV KB:3335'  
ELEV GL:3324'

ALL DEPTHS ARE KB

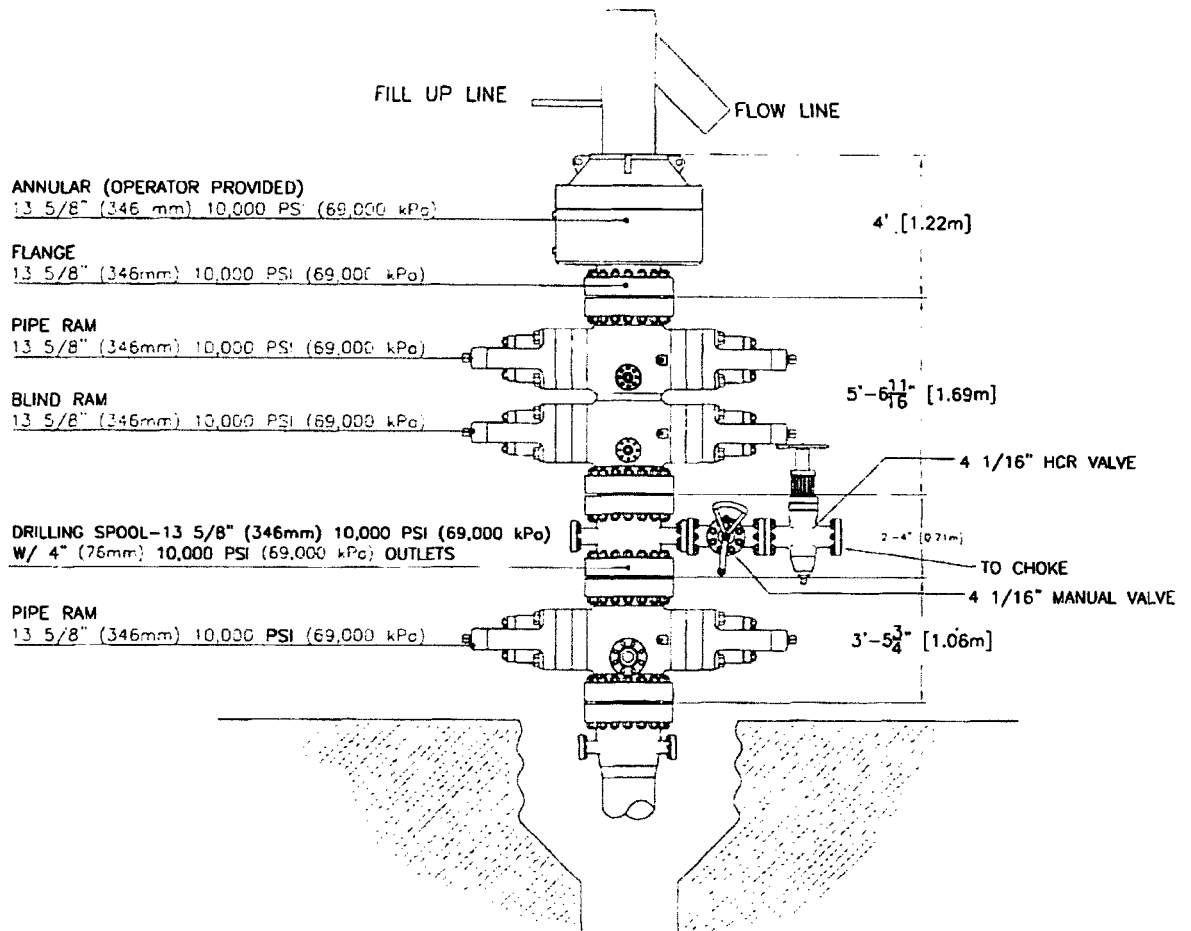




# BOP LAYOUT

10 m

RIG 000



NOTE: CASING BOWL SET AT MATING LEVEL AND  $\frac{1}{2}$ "  
ALLOWANCE FOR RING GASKET GAP.

STACK COMPONENTS REPRESENTED ARE SUBJECT TO AVAILABILITY, PLEASE CONFIRM WITH WELL CONTROL DEPARTMENT MANAGER.



EQUIPMENT REPRESENTATION ONLY  
NOT DRAWN TO SCALE

## PRECISION DRILLING

DATE: 2014/02/26  
DWG No.: BOP-000-008  
DWG BY: RW



**CO# 422**



EQUIPMENT REPRESENTATION ONLY  
NOT DRAWN TO SCALE

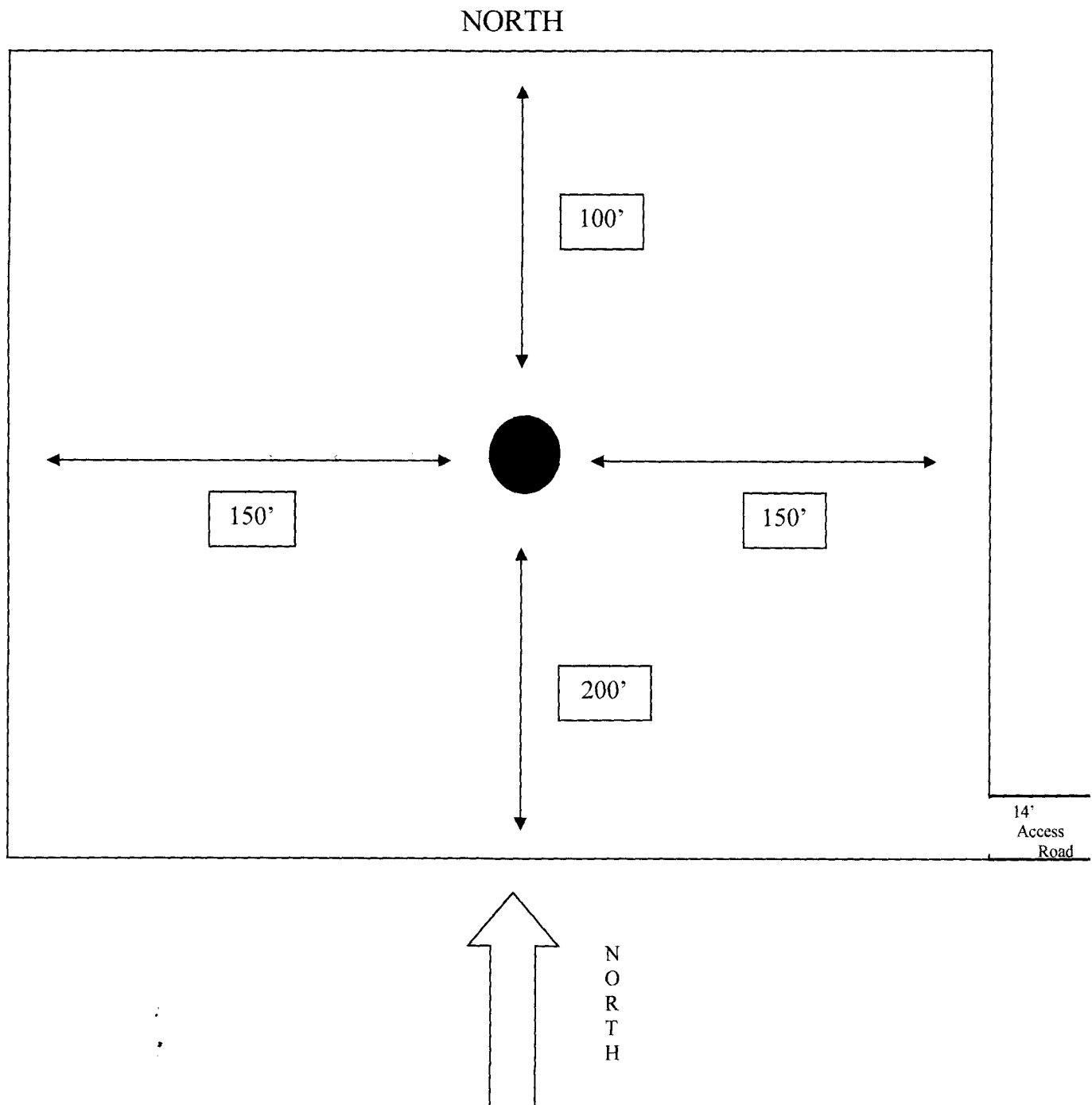
## PRECISION DRILLING

DATE: 2011/09/08  
DWG No.: 802-422-W7  
DWG BY : MM



**EXHIBIT D**

**Rig Plat Only  
PRONGHORN FED SWD #1  
V-DOOR EAST**





**JUDAH OIL, LLC.**  
**RE-ENTRY OF BIG EDDY UNIT #36**  
**NAME: PRONGHORN FEDERAL SWD #1**  
**HYDROGEN SULFIDE (H<sub>2</sub>S) CONTINGENCY**  
**DRILLING PLAN**

**Assumed 100 ppm ROE = 3000'**  
**100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.**

**This is an open drilling site. H<sub>2</sub>S monitoring equipment and emergency response equipment will be rigged up and in use when the company drills out from under surface casing. H<sub>2</sub>S monitors, warning signs, wind indicators and flags will be in use.**

A. All personnel shall receive proper H<sub>2</sub>S 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/Escapes 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
- 
- H<sub>2</sub>S 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 H<sub>2</sub>S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H<sub>2</sub>S bearing zones.
- Metallurgy:
  - a. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, shall be suitable for H<sub>2</sub>S service.
  - b. All elastomers used for packing and seals shall be H<sub>2</sub>S trim.
- Communication:  
Communication will be via two way radio in emergency and company vehicles. Cell phones and land lines where available.

### **Contacting Authorities**

Judah Oil 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. Judah Oil response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER) and BLM Onshore Order #6.

### **H<sub>2</sub>S Operations**

Though no H<sub>2</sub>S 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<sub>2</sub>S 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<sub>2</sub>S 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.



## H2S CONTINGENCY DRILLING PLAN EMERGENCY CONTACTS

**Company Offices** - JUDAH OIL Office

575-513-1984

KEY PERSONNEL					
Name	Title	Location	Phone #	CELL #	
JAMES CAMPANELLA	MANAGER	ARTESIA	575-748-4730	575-748-5488	
ASHLIE QUINONES	OFFICE MANAGER		575--513-1984		
RICHARD VALVERDE	FIELD SUPERINTENDENT		575-513-1984		

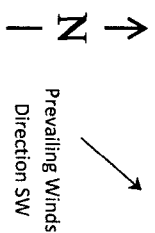
Agency Call List		
City	Agency or Office	Telephone Number
Artesia	Ambulance	911
Artesia	State Police	575-746-2703
Artesia	Sheriff's Office	575-746-9888
Artesia	City Police	575-746-2703
Artesia	Fire Department	575-746-2701
Artesia	Local Emergency Planning Committee	575-746-2122
Artesia	New Mexico OCD District II	575-748-1283
Carlsbad	Ambulance	911
Carlsbad	State Police	575-885-3137
Carlsbad	Sheriff's Office	575-887-7551
Carlsbad	City Police	575-885-2111
Carlsbad	Fire Department	575-885-2111
Carlsbad	Local Emergency Planning Committee	575-887-3798
Carlsbad	US DOI Bureau of Land Management	575-887-6544
State Wide	New Mexico Emergency Response Commission ("NMERC")	505-476-9600
State Wide	NMERC 24 hour Number	505-827-9126
State Wide	New Mexico State Emergency Operations Center	505-476-9635
National	National Emergency Response Center (Washington, D.C.)	800-424-8802



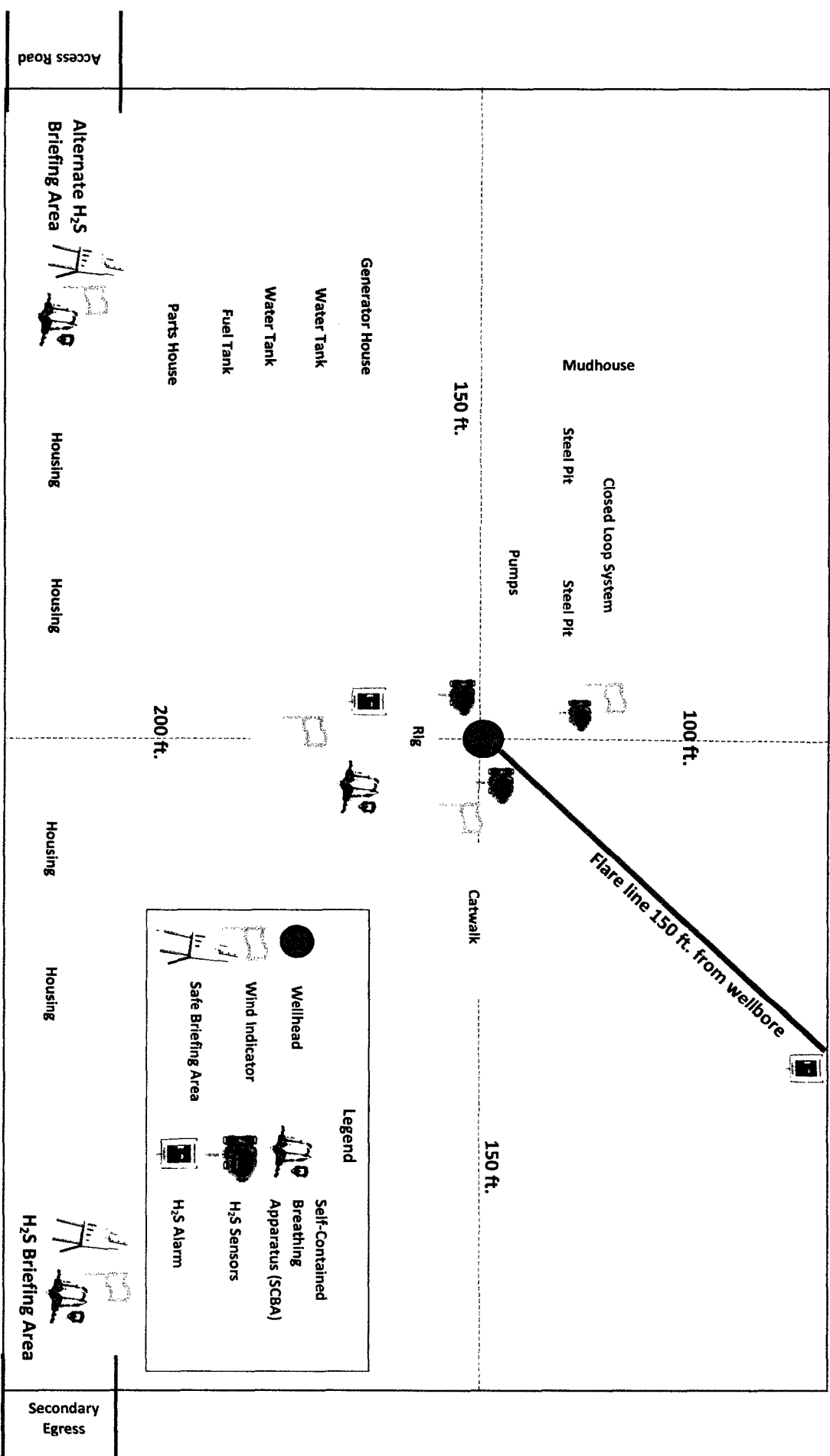
## H2S CONTINGENCY DRILLING PLAN EMERGENCY CONTACTS

Emergency Services				
Name	Service	Location	Telephone Number	Alternate Number
Boots & Coots International Well Control	Well Control	Houston / Odessa	1-800-256-9688	281-931-8884
Cudd Pressure Control	Well Control & Pumping	Odessa	915-699-0139	915-563-3356
Baker Hughes Inc.	Pumping Service	Artesia, Hobbs and Odessa	575-746-2757	SAME
Total Safety	Safety Equipment and Personnel	Artesia	575-746-2847	SAME
Cutter Oilfield Services	Drilling Systems Equipment	Midland	432-488-6707	SAME
Assurance Fire & Safety	Safety Equipment and Personnel	Artesia	575-396-9702	575-441-2224
Flight for Life	Emergency Helicopter Evacuation	Lubbock	806-743-9911	SAME
Aerocare	Emergency Helicopter Evacuation	Lubbock	806-747-8923	SAME
Med Flight Air Ambulance	Emergency Helicopter Evacuation	Albuquerque	505-842-4433	SAME
Artesia General Hospital	Emergency Medical Care	Artesia	575-748-3333	702 North 13 Street





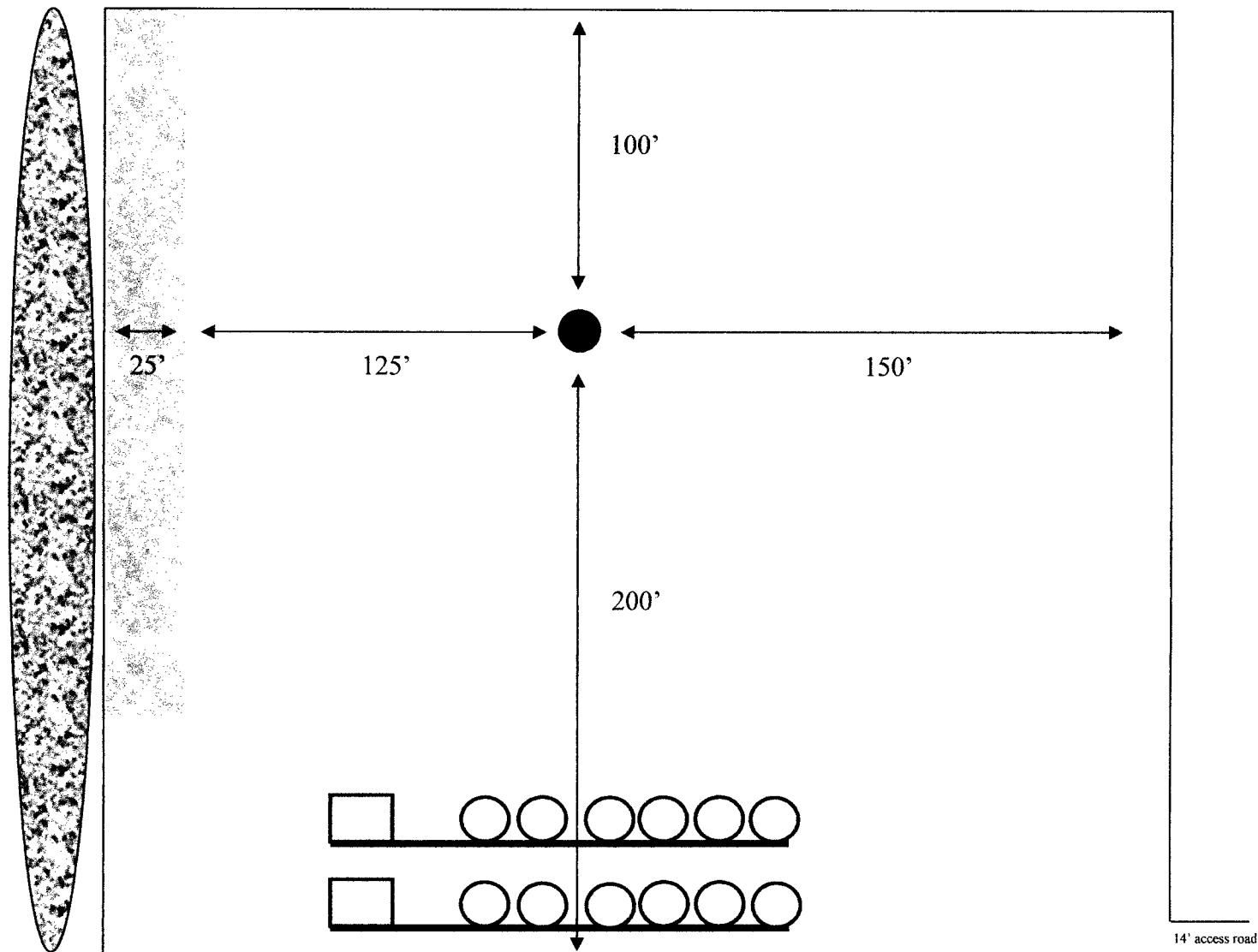
# H2S Briefing Areas and Alarm Locations





**EXHIBIT C**

**Interim Reclamation & Production Facilities  
PRONGHORN FED SWD #1  
V-DOOR EAST**



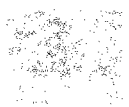
**LEGEND**



Well Bore



Topsoil



Interim Reclamation



Ditch and Berm



Production Facilities

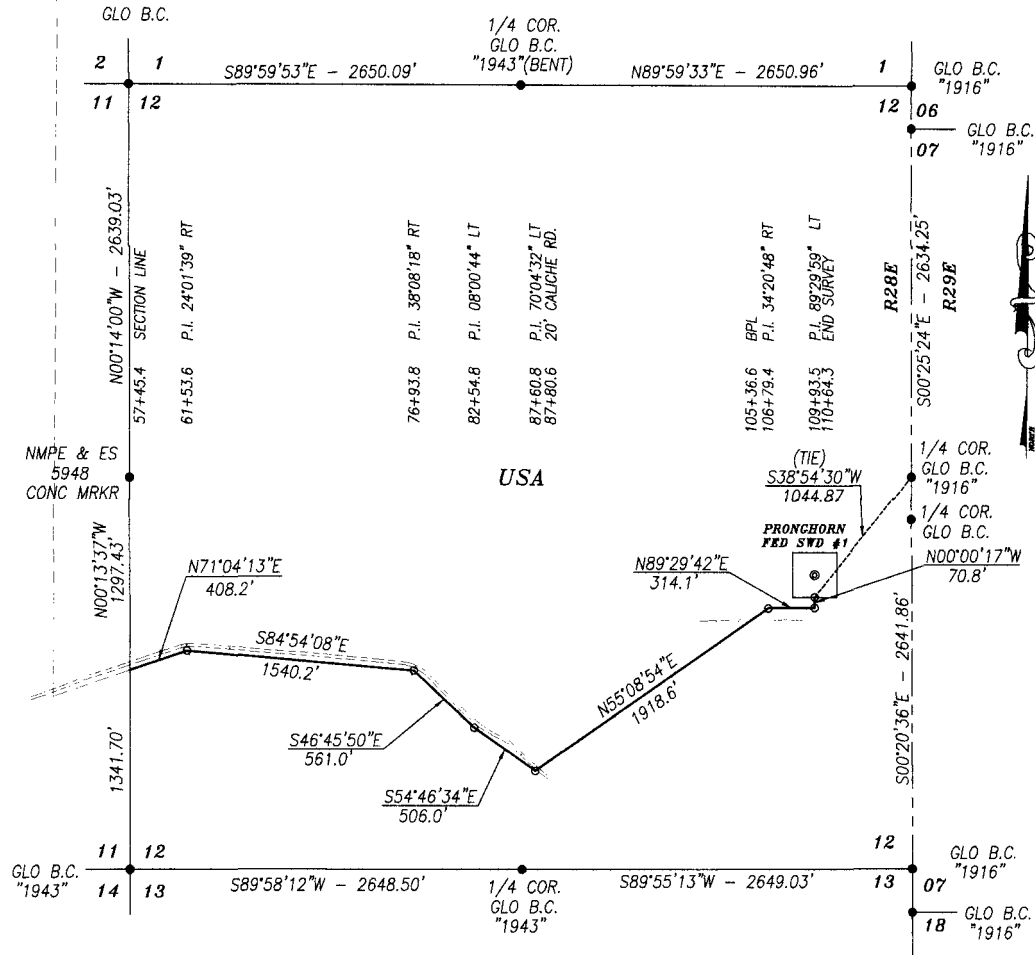


**NORTH  
NORTHWEST**



# POWER LINE PLAT JUDAH OIL, LLC

POWER LINE FROM TIE IN TO THE PRONGHORN FED SWD #1 IN  
SECTION 12, TOWNSHIP 21 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



## DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE AND 5318.9 FEET OR 322.36 RODS OR 1.007 MILES IN LENGTH CROSSING USA LAND IN SECTION 12, TOWNSHIP 21 SOUTH, RANGE 28 EAST, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

### BASIS OF BEARING:

BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

### CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



Chad Harcrow  
CHAD HARCROW N.M.P.S. NO. 17777

2/27/15  
DATE

### HARCROW SURVEYING, LLC

2314 W. MAIN ST, ARTESIA, N.M. 88210  
PH: (575) 746-2158 FAX: (575) 746-2158  
c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

### JUDAH OIL, LLC

SURVEY OF A PROPOSED POWERLINE LOCATED IN  
SECTION 12, TOWNSHIP 21 SOUTH, RANGE 28 EAST,  
LEA COUNTY, NMPM, NEW MEXICO

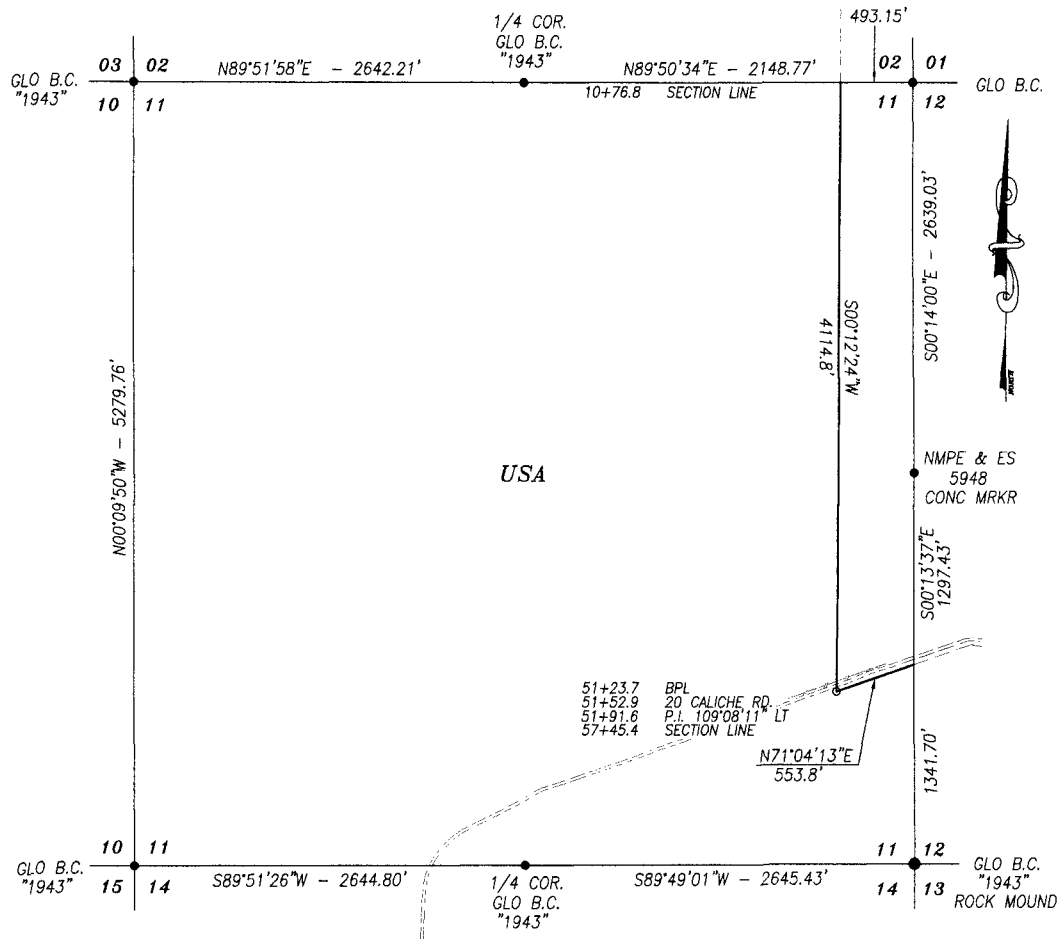
SURVEY DATE: JANUARY 15, 2015	
DRAFTING DATE: FEBRUARY 24, 2015	PAGE 1 OF 1
APPROVED BY: CH	DRAWN BY: VD FILE: 14-1324



# POWER LINE PLAT

## JUDAH OIL, LLC

POWER LINE FROM TIE IN TO THE PRONGHORN FED SWD #1 IN  
SECTION 11, TOWNSHIP 21 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



### DESCRIPTION

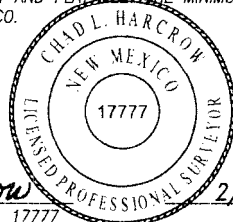
A STRIP OF LAND 30.0 FEET WIDE AND 4668.6 FEET OR 282.95 RODS OR 0.884 MILES IN LENGTH CROSSING USA LAND IN SECTION 11, TOWNSHIP 21 SOUTH, RANGE 28 EAST, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

### BASIS OF BEARING:

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### CERTIFICATION

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Chad Harcrow

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c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

### JUDAH OIL, LLC

SURVEY OF A PROPOSED POWERLINE LOCATED IN  
SECTION 11, TOWNSHIP 21 SOUTH, RANGE 28 EAST,  
EDDY COUNTY, NMPM, NEW MEXICO

SURVEY DATE: JANUARY 15, 2015

DRAFTING DATE: FEBRUARY 24, 2015

APPROVED BY: CH

DRAWN BY: VD

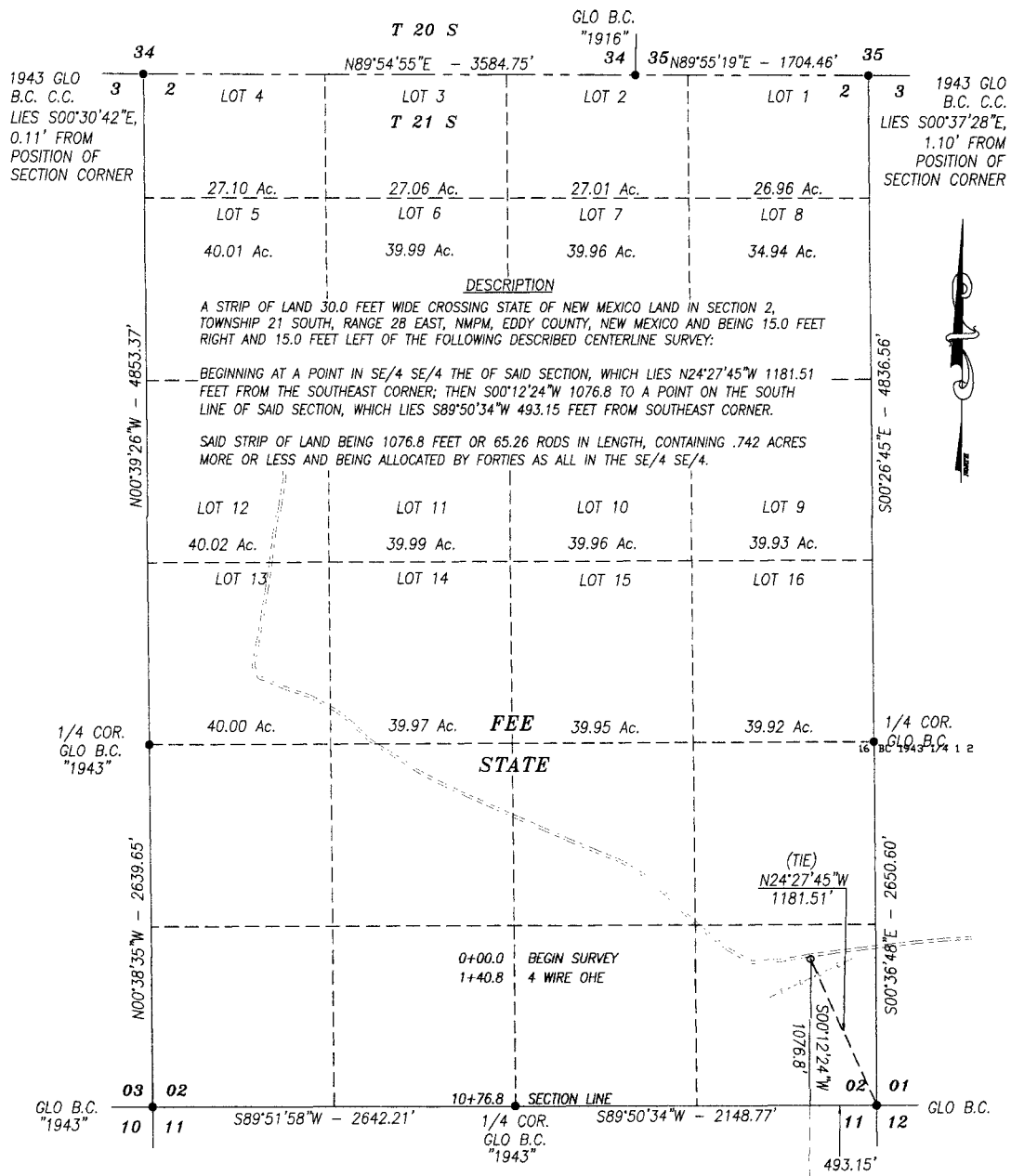
PAGE 2 OF 3

FILE: 14-1324



# POWER LINE PLAT JUDAH OIL, LLC

POWER LINE FROM TIE IN TO THE PRONGHORN FED SWD #1 IN  
SECTION 11, TOWNSHIP 21 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



**BASIS OF BEARING:**  
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**CERTIFICATION**  
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*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777

2/27/15  
DATE

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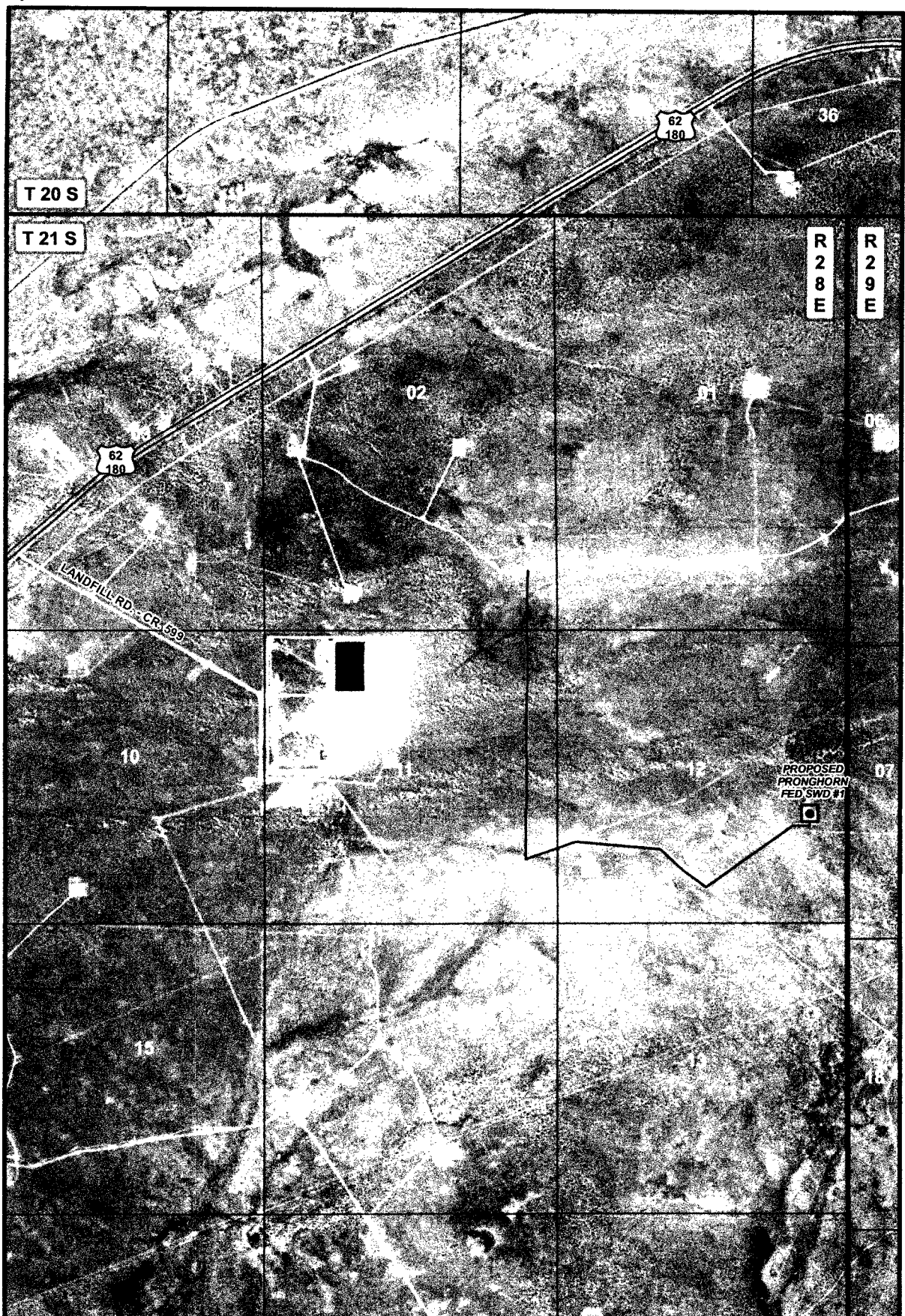
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SCALE: 1"=1000'

## JUDAH OIL, LLC

SURVEY OF A PROPOSED POWERLINE LOCATED IN  
SECTION 2, TOWNSHIP 21 SOUTH, RANGE 28 EAST,  
LEA COUNTY, NMPM, NEW MEXICO

SURVEY DATE: JANUARY 15, 2015	
DRAFTING DATE: FEBRUARY 24, 2015	PAGE 1 OF 3
APPROVED BY: CH	DRAWN BY: VD FILE: 14-1324

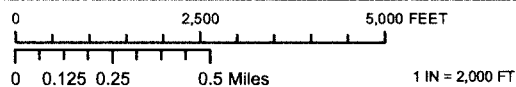




# LEGEND

- POWERLINE
- WELL
- WELLPAD

SECTIONS: 2, 11, 12      TOWNSHIP: 21 S.      RANGE: 28 E.  
 STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M.  
 W.O. # 14-1324      LEASE: PRONGHORN FED SWD

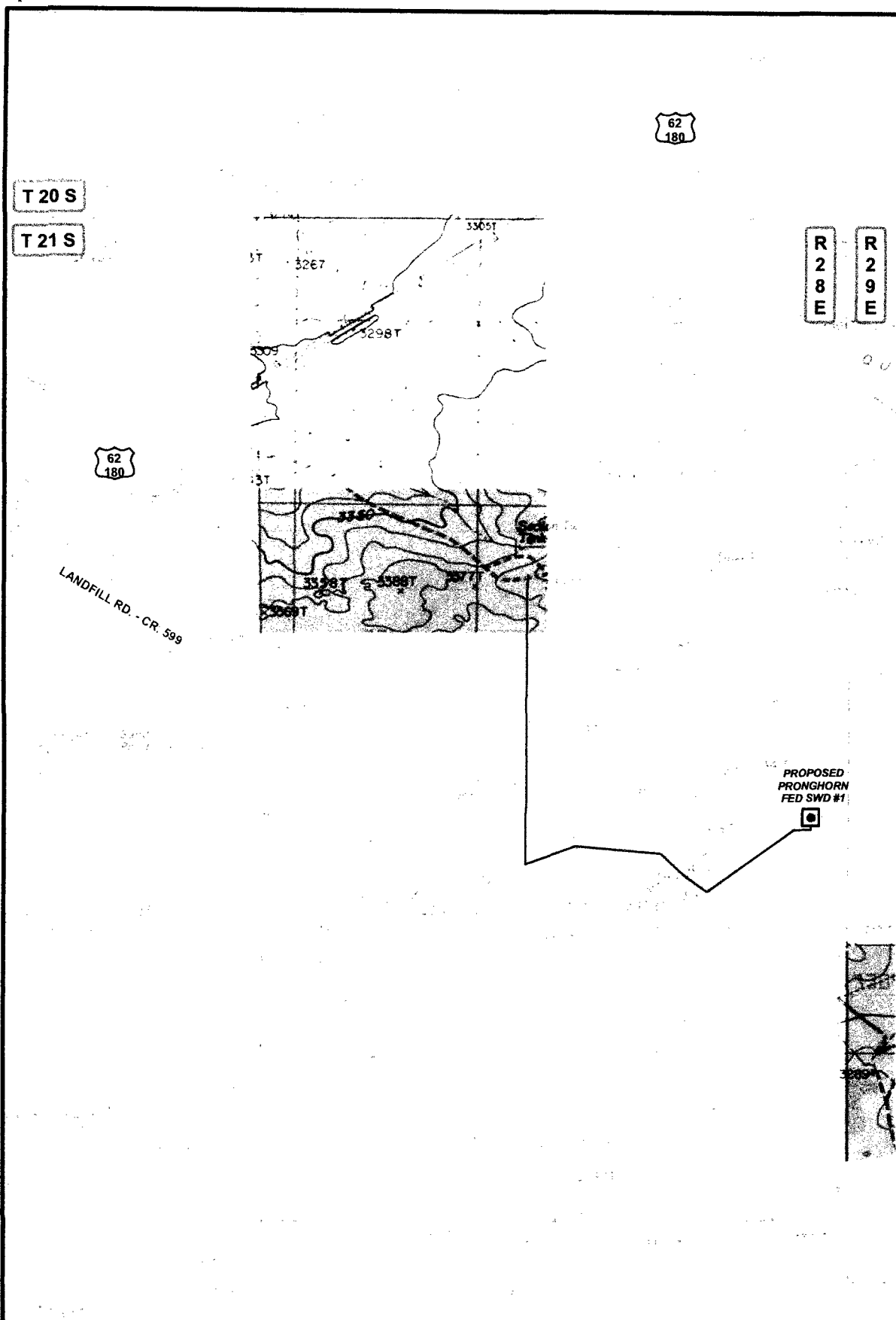


**JUDAH  
OIL, LLC.**



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 c.harcrow@harcrowsurveying.com





<b>LEGEND</b> POWERLINE WELL WELLPAD  PRIVATE STATE OF NM US BLM	<b>SECTIONS: 2, 11, 12      TOWNSHIP: 21 S.      RANGE: 28 E.</b>		
	<b>STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M</b>		
	<b>W.O. # 14-1324      LEASE: PRONGHORN FED SWD</b>		

**JUDAH OIL, LLC**

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 c.harcrow@harcrowsurveying.com



## NEW MEXICO.



A STRIP OF LAND 30.0 FEET WIDE AND 5462.8 FEET OR 331.08 RODS OR 1.035 MILES IN LENGTH CROSSING USA LAND IN SECTION 12, TOWNSHIP 21 SOUTH, RANGE 28 EAST, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

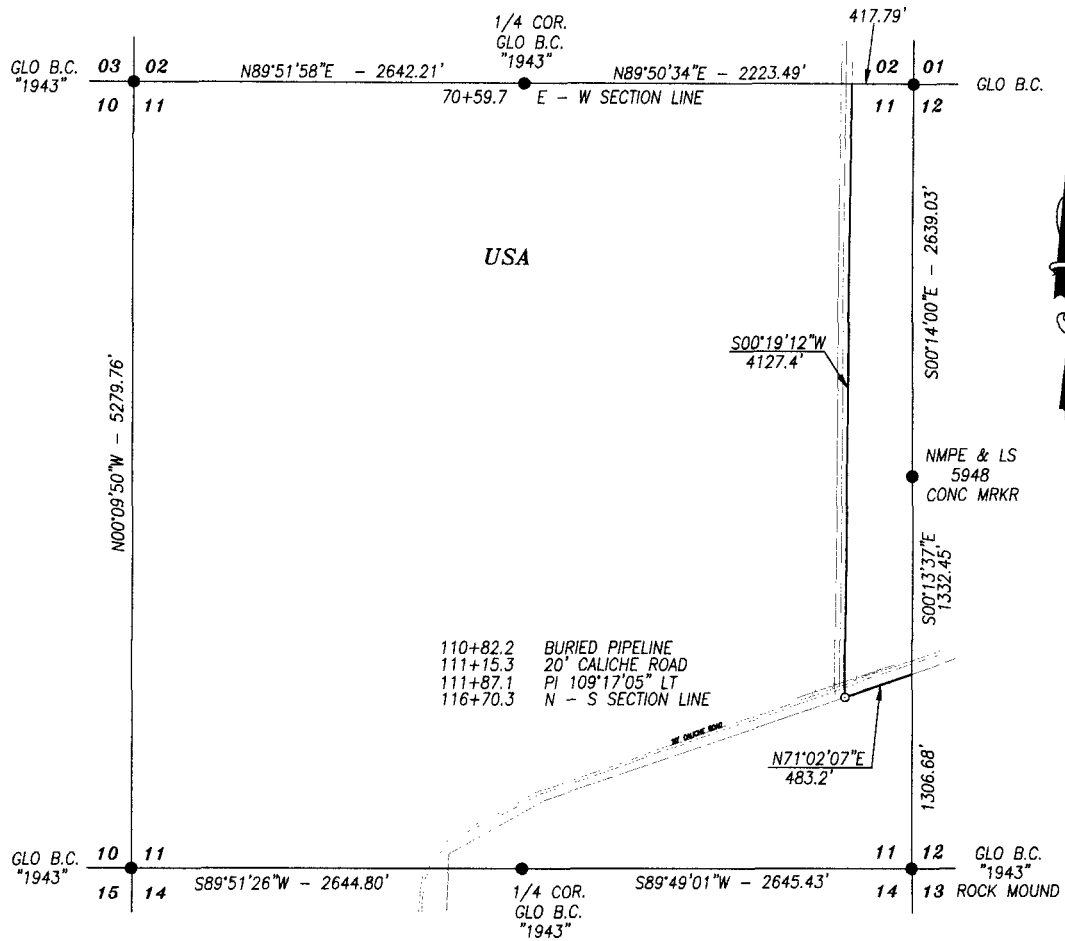


FILE: 14-1325

2/6/15  
DATE



SECTION 11, TOWNSHIP 21 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE AND 4610.6 FEET OR 279.43 RODS OR 0.873 MILES IN LENGTH CROSSING USA LAND IN SECTION 11, TOWNSHIP 21 SOUTH, RANGE 28 EAST, EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

**BASIS OF BEARING:**  
BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

**CERTIFICATION**  
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*

CHAD HARCROW N.M.P.S. NO. 17777

2/6/15  
DATE

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c.harcrow@harcrowsurveying.com



1000 0 1000 2000 FEET  
SCALE: 1"=1000'

**JUDAH OIL, LLC**

SURVEY OF A PROPOSED PIPELINE LOCATED IN  
SECTION 11, TOWNSHIP 21 SOUTH, RANGE 28 EAST,  
EDDY COUNTY, NMPM, NEW MEXICO

SURVEY DATE: JANUARY 15, 2015

DRAFTING DATE: JANUARY 31, 2015

APPROVED BY: CH

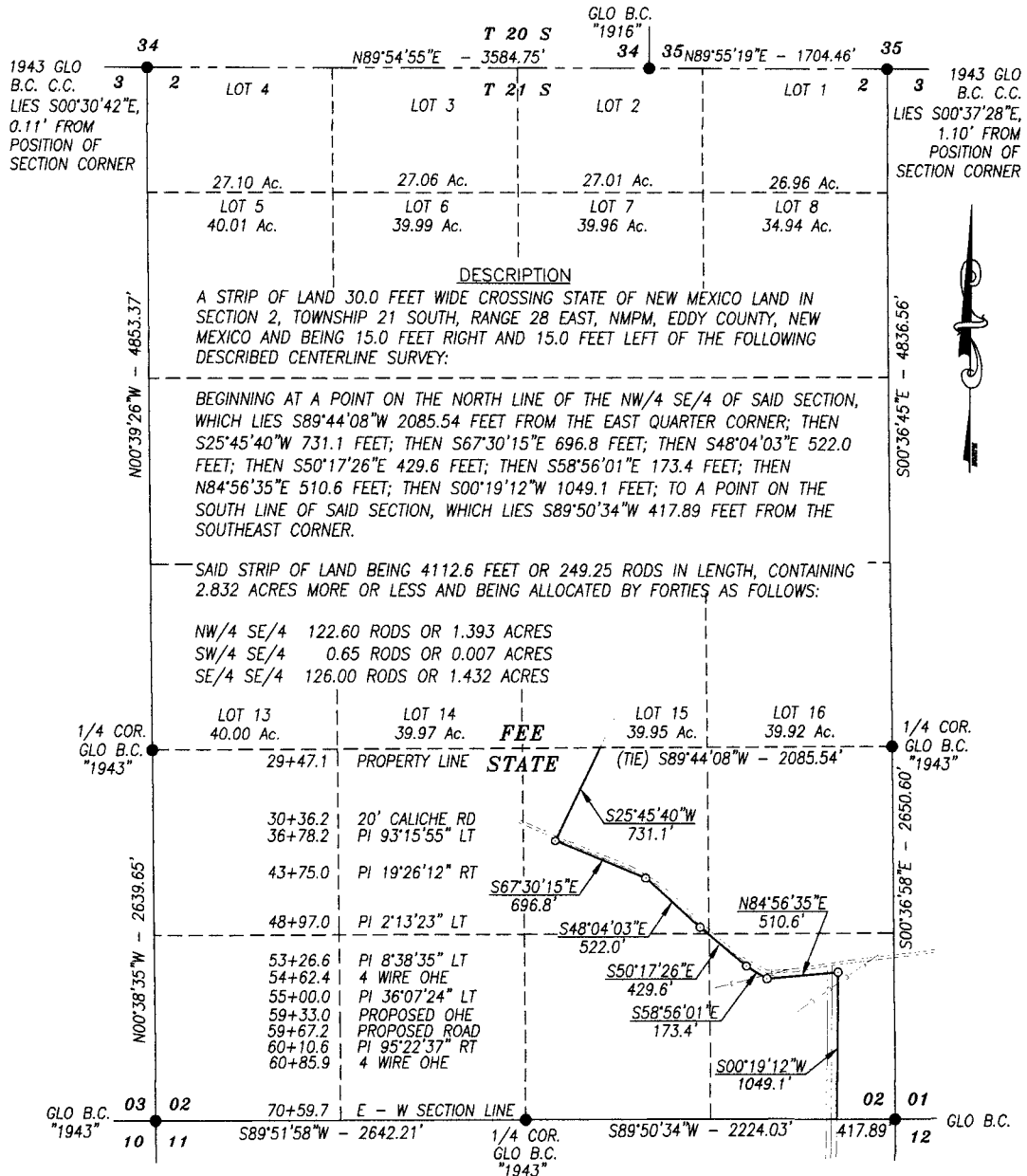
DRAWN BY: AM

PAGE 3 OF 4

FILE: 14-1325



SECTION 2, TOWNSHIP 21 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



**BASIS OF BEARING:**  
BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

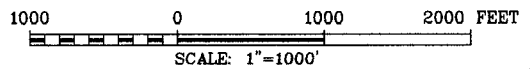
**HARCROW SURVEYING, LLC**  
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PH: (575) 746-2158 FAX: (575) 746-2158  
c.harcrow@harcrowsurveying.com



**CERTIFICATION**  
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



*Chad Harcrow*  
CHAD HARCROW N.M.P.S. NO. 17777  
DATE 2/6/15



JUDAH OIL, LLC	
SURVEY OF A PROPOSED PIPELINE LOCATED IN SECTION 2, TOWNSHIP 21 SOUTH, RANGE 28 EAST, LEA COUNTY, NEW MEXICO	
SURVEY DATE: JANUARY 15, 2015	
DRAFTING DATE: JANUARY 31, 2015	PAGE 2 OF 4
APPROVED BY: CH	DRAWN BY: AM FILE: 14-1325



## NEW MEXICO.



BASIS OF BEARING:

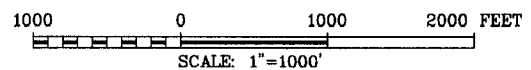
### CERTIFICATION

HARCROW SURVEYING, LLC

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PH: (575) 746-2158 FAX: (575) 746-2158

c.harcrow@harcrowsurveying.com



**SURVEY DATE: JANUARY 15, 2015**

DRAFTING DATE: JANUARY 31, 2015

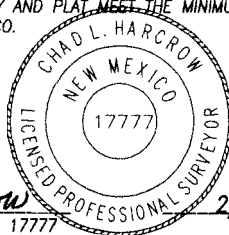
PAGE 1 OF 4

APPROVED BY: CH

**DRAWN BY: AM**

FILE: 14-1325

Chad Harrow



CHAD HARCROW N.M.P.S. NO. 17777

2/6/15  
DATE

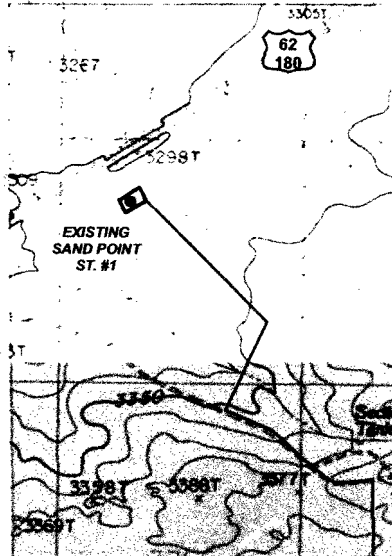


T 20 S

T 21 S

R 28 E

R 29 E



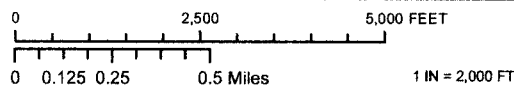
LANDFILL RD. - CR. 509



LEGEND

- WELL
- WELLPAD
- PIPELINE
- PRIVATE
- STATE OF NM
- US BLM

SECTIONS: 2 & 11 TOWNSHIP: 21 S. RANGE: 28 E.  
STATE: NEW MEXICO COUNTY: EDDY SURVEY: N.M.P.M.  
W.O. # 14-1325 LEASE: PRONGHORN FED SWD

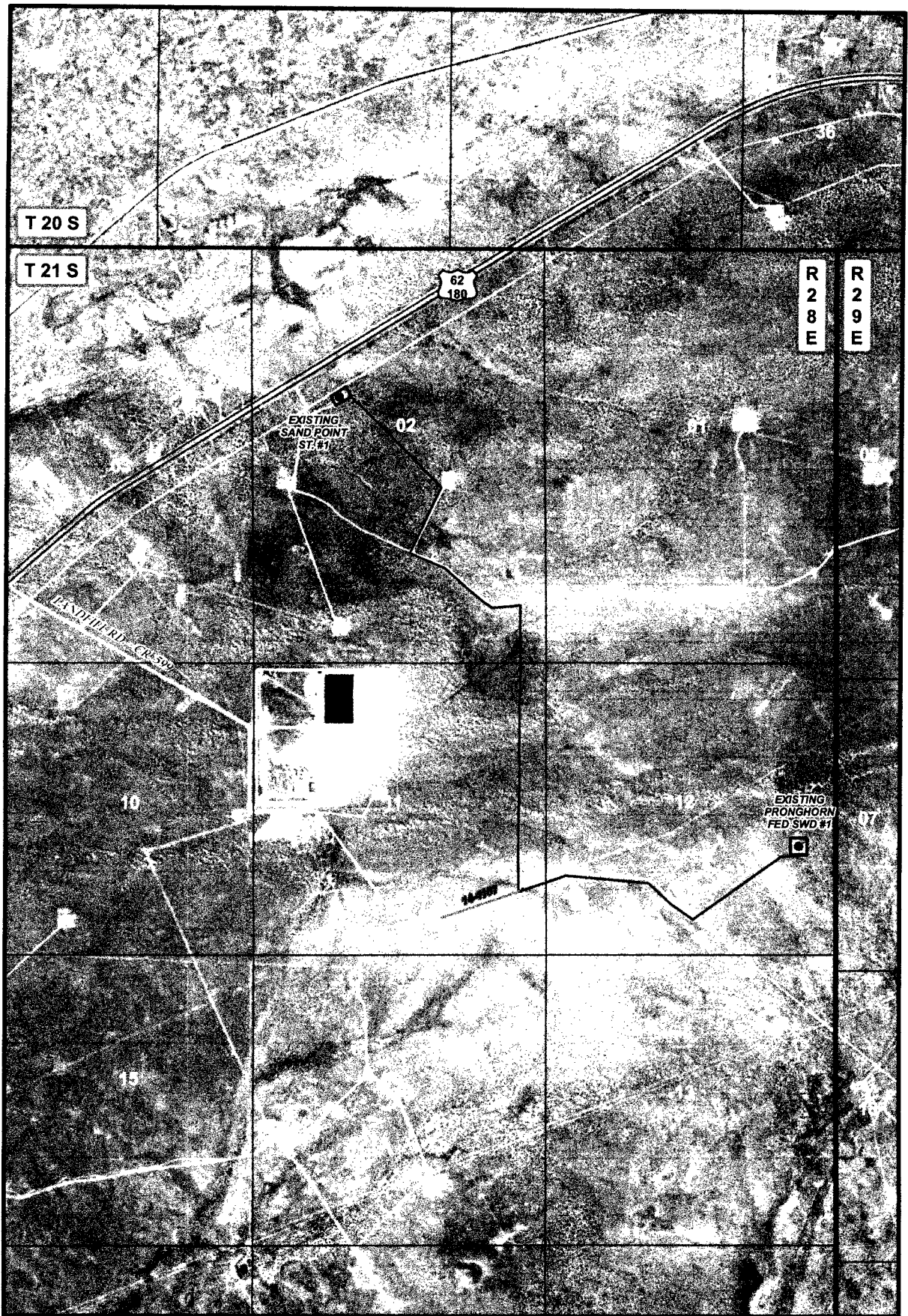


JUDAH  
OIL, LLC.



HARCROW SURVEYING, LLC.  
2314 W. MAIN ST. ARTESIA, NM 88210  
PH: (575) 746-2158 FAX: (575) 746-2158  
charcrow@harcrowsurveying.com





LEGEND

- WELL
- WELLPAD
- PIPELINE

SECTIONS: 2 & 11      TOWNSHIP: 21 S.      RANGE: 28 E.  
 STATE: NEW MEXICO      COUNTY: EDDY      SURVEY: N.M.P.M  
 W.O. # 14-1325      LEASE: PRONGHORN FED SWD

0      2,500      5,000 FEET  
 0      0.125      0.25      0.5 Miles      1 IN = 2,000 FT

**JUDAH  
OIL, LLC**



**HARCROW SURVEYING, LLC.**  
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 PH: (575) 746-2158 FAX: (575) 746-2158  
 c.harcrow@harcrowsurveying.com



**SURFACE USE PLAN**  
**JUDAH OIL, LLC.**  
**PRONGHORN FED SWD #1 (RE-ENTRY OF BEU #36)**  
**1980' FSL & 660' FEL, Section 12, T. 21 S., R. 28 E.**  
**Eddy County, New Mexico**

This plan is submitted with form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

- A. DIRECTIONS: Go northeast of Carlsbad, NM, on Highway 285 for 8.4 miles, turn south on lease road for 1.69 miles. The proposed road to the south begins at this point. All existing roads are either paved or a caliche lease road.
- B. See attached plats and maps provided by Harcrow Surveying of Artesia.
- C. The access routes from Highway 62/180 to the well location is depicted on **Exhibit A.**
- D. Existing roads on the access route will be improved and maintained to the standard set forth in Section 2 of this Surface Use Plan of Operations.

2. NEW OR RECONSTRUCTED ACCESS ROADS:

- A. There will be 1962.4 ft. of new road constructed from the southwest corner of the proposed well, west (upgrading the old P&A well's original access road), then another new road, so as to bypass the Eddy County Sandpoint Landfill, north, of 4085.5' on federal lands in section 11, and 1090.4' of state land in section 2, to the existing lease road. Total of new road construction on federal lands will be 6,047.9 ft.
- B. The maximum width of the driving surface will be 14 feet. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1 foot deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.



**Level Ground Section**

- C. Surface material will be native caliche. The average grade of the entire road will be 3%.
- D. Fence Cuts: Yes
- E. Cattle guards: Yes
- F. Turnouts: No
- G. Culverts: No
- H. Cuts and Fills: Not significant
- I. Approximately 6 inches of topsoil (root zone) will be stripped from the proposed access road prior to any further construction activity. The topsoil will be seeded with the proper seed mix designated by the BLM.



- J. The access road will be constructed and maintained as necessary to prevent soil erosion and accommodate all-weather traffic. The road will be crowned and ditched with water turnouts installed as necessary to provide for proper drainage along the access road route.
- K. The access road and associated drainage structures will be constructed and maintained in accordance with road guidelines contained in the joint BLM/USFS publication: Surface Operating Standards for Oil and Gas Exploration and Development, The Gold Book, Fourth Edition and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction.

3. LOCATION OF EXISTING WELLS:

See attached map (**Exhibit B**) showing all wells within a one-mile radius.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. This proposed Salt Water Disposal (SWD) well will have a battery, on south portion of pad, consisting of three 1,000BBL steel water tanks, one 750BBL Gunbarrell tank, one 500BBL skim oil tank and a disposal dump with electric panel (**SEE EXHIBIT E-1**). There will be high level shut off valves and alarms. The pad will be fenced and security cameras on location. The company also proposes to construct 10,073.40' of a buried 6", poly, Salt Water Disposal (SWD) pipeline from the well, following the road route to the existing SWD station in section 2. They also propose to construct 9987.5' of a 12.5 KV overhead electric line from the well, following the proposed road route to the existing line in section 2. The access road, SWD line and electric line are all off-lease actions and a ROW has been filed with the Carlsbad BLM Realty staff (**SEE EXHIBIT E**).
- B. All permanent (on site six months or longer) aboveground structures constructed or installed on location and not subject to safety requirements will be painted to BLM specifications.
- C. Containment berms will be constructed completely around production facilities designed to hold fluids. The containment berms will be constructed or compacted subsoil, be sufficiently impervious, hold 1 ½ times the capacity of the largest tank and away from cut or fill areas.

5. LOCATION AND TYPE OF WATER SUPPLY:

The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. The water will be obtained from commercial water stations in the area and hauled to the location by transport truck using the existing and proposed roads shown in the attached survey plats. If a commercial water well is nearby, a temporary, surface poly line, will be laid along existing roads or other ROW easements and the water pumped to the well. No water well will be drilled on the location.

6. SOURCE OF CONSTRUCTION MATERIALS:

Any construction material that may be required for surfacing of the drill pad and access road will be from a contractor having a permitted source of materials within the general area. No construction materials will be removed from Federal lands without prior approval from the appropriate surface management agency. All roads will be constructed of 6" rolled and compacted caliche.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. The well will be drilled utilizing a closed loop mud system. Drill cuttings will be held in



- roll-off style mud boxes and taken to an NMOCD approved disposal site.
- B. Drilling fluids will be contained in steel mud pits.
- C. Water produced from the well during completion will be held temporarily in steel tanks and then taken to an NMOCD approved commercial disposal facility.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Portable, self-contained chemical toilets will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of in an approved sewage disposal facility. All state and local laws and regulations pertaining to disposal of human and solid waste will be complied with. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- F. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Immediately after drilling all debris and other waste materials on and around the well location, not contained in the trash cage will be cleaned up and removed from the location. No potentially adverse materials or substances will be left on the location.

8. ANCILLARY FACILITIES:

No campsite, airstrip, or other facilities will be built as a result of the operation of this well. No staging areas are needed.

9. WELL SITE LAYOUT:

- A. **Exhibit D** shows the dimensions of the proposed well pad.
- B. The proposed well pad size will be 300' x 300' which will all be within existing pad (**See Exhibit D**). There will be no reserve pit due to the well being drilled utilizing a closed loop mud system. The closed loop system will meet the NMOCD requirements 19.15.17 .
- C. The Harcrow Surveying Company of Artesia's plat, Form C-102 and **Exhibit D**, shows how the well will be turned to a V-Door East.
- D. A 600' x 600' area has been staked and flagged.
- E. All equipment and vehicles will be confined to the approved disturbed areas of this APD (i.e., access road, well pad, and topsoil storage areas)

10. PLANS FOR SURFACE RECLAMATION:

- A. After concluding the drilling and/or completion operations, if the well is found non-commercial, all the equipment will be removed, the surface material, caliche, will be removed from the well pad and road and transported to the original caliche pit or used for other roads. The original stock piled top soil will be returned to the pad and contoured, as close as possible, to the original topography. The access road will have the caliche removed and the road ripped, barricaded and seeded as directed by the BLM.
- B. If the well is a producer, the portions of the location not essential to production facilities or space required for workover operations, will be reclaimed and seeded as per BLM requirements. (**SEE EXHIBIT C FOR INTERIM RECLAMATION PLAT FOR THIS WELL**)
- C. Reclamation Performance Standards  
The following reclamation performance standards will be met:

*Interim Reclamation* – Includes disturbed areas that may be redisturbed during operations and will be redisturbed at final reclamation to achieve restoration of the original landform and a natural vegetative community.

- Disturbed areas not needed for active, long-term production operations



or vehicle travel will be recontoured, protected from erosion, and revegetated with a self-sustaining, vigorous, diverse, native (or as otherwise approved) plant community sufficient to minimize visual impacts, provide forage, stabilize soils, and impede the invasion of noxious, invasive, and non-native weeds.

*Final Reclamation* – Includes disturbed areas where the original landform and a natural vegetative community will be restored and it is anticipated the site will not be redisturbed for future development.

- The original landform will be restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors.
- A self-sustaining, vigorous, diverse, native (or otherwise approved) plant community will be established on the site, with a density sufficient to control erosion and invasion by non-native plants and to re-establish wildlife habitat or forage production. At a minimum, the established plant community will consist of species included in the seed mix and/or desirable species occurring in the surrounding natural vegetation.
- Erosion features are equal to or less than surrounding area and erosion control is sufficient so that water naturally infiltrates into the soil and gully, headcutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed.
- The site will be free of State- or county-listed noxious weeds, oil field debris and equipment, and contaminated soil. Invasive and non-native weeds are controlled.

#### D. Reclamation Actions

Earthwork for interim and final reclamation will be completed within 6 months of well completion or plugging unless a delay is approved in writing by the BLM authorized officer.

The following minimum reclamation actions will be taken to ensure that the reclamation objectives and standards are met. It may be necessary to take additional reclamation actions beyond the minimum in order to achieve the Reclamation Standards.

#### Reclamation – General

##### Notification:

- The BLM will be notified at least 3 days prior to commencement of any reclamation operations.

##### Housekeeping:

- Within 30 days of well completion, the well location and surrounding areas(s) will be cleared of, and maintained free of, all debris, materials, trash, and equipment not required for production.
- No hazardous substances, trash, or litter will be buried or placed in pits.

##### Topsoil Management:

- Operations will disturb the minimum amount of surface area necessary to conduct safe and efficient operations.
- Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the topsoil will be stripped and stockpiled



around the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil will include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils.

- Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment or so dry that dust clouds greater than 30 feet tall are created. If such equipment creates ruts in excess of four (4) inches deep, the soil will be deemed too wet.
- No major depressions will be left that would trap water and cause ponding unless the intended purpose is to trap runoff and sediment.

Seeding:

- Seedbed Preparation. Initial seedbed preparation will consist of recontouring to the appropriate interim or final reclamation standard. All compacted areas to be seeded will be ripped to a minimum depth of 18 inches with a minimum furrow spacing of 2 feet, followed by recontouring the surface and then evenly spreading the stockpiled topsoil. Prior to seeding, the seedbed will be scarified to a depth of no less than 4 – 6 inches. If the site is to be broadcast seeded, the surface will be left rough enough to trap seed and snow, control erosion, and increase water infiltration.
- If broadcast seeding is to be used and is delayed, final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
- Seed Application. Seeding will be conducted no more than two weeks following completion of final seedbed preparation. A certified weed-free seed mix designed by the BLM to meet reclamation standards will be used.
- If the site is harrowed or dragged, seed will be covered by no more than 0.25 inch of soil.

11. SURFACE OWNERSHIP:

- A. The surface is owned by the U. S. Government and is administered by the Bureau of Land Management. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas.

12. OTHER INFORMATION:

- A. The area surrounding the well site is in a fairly flat, hardland mesquite to rolling dune featured type area. The vegetation consists of Mesquite, Yucca, shinnery Oak with three-awns and some dropseed species.
- B. There is no permanent or live water in the immediate area.
- C. There are no dwellings within 2 miles of this location.
- D. A class III archaeological survey has been conducted by Boone Archaeological Services and filed with the Carlsbad Field Office of the Bureau of Land Management.

13. BOND COVERAGE:

Bond Coverage is Statewide; Bond Number NMB-000451.



OPERATORS REPRESENTATIVE:

The Judah Oil, LLC. representatives responsible for ensuring compliance of the surface use plan are listed below:

Surface:

Barry W. Hunt – Permitting Agent  
1403 Springs Farm Place  
Carlsbad, NM 88220  
(575) 885-1417 (Home)  
(575) 361-4078 (Cell)

Drilling & Production:

James B. Campanella – Manager Judah Oil, LLC.  
P.O. Box 870  
1805 W Jacobs Ave.  
Artesia, NM 88221-0870  
(575) 748-4730 (Office)  
(575) 748-5488 (Cell)

**ON-SITE PERFORMED ON 11/12/14 RESULTED IN PROPOSED RE-ENTRY LOCATION AND ROAD, E-LINE, SWD PIPELINE BEING OK WHERE ALL IS STAKED. IT WAS AGREED TO TURN THE V-DOOR EAST AND D BATTERY TO SOUTH. IT WAS ALSO AGREED TO PLACE THE TOP SOIL TO THE WEST, AND THE INTERIM RECLAMATION WILL BE THE WEST SIDE OF THE PAD.**

**PRESENT AT ON-SITE:**

**BARRY W. HUNT - AGENT FOR JUDAH OIL, LLC.**  
**INDRA DAHAL – BLM**  
**HARCROW SURVEYING, LLC. - SURVEYORS**



# **JUDAH OIL, LLC**

Oil and Gas Operating

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October 14, 2014

To: Carlsbad Bureau of Land Management  
620 E Greene St.  
Carlsbad, NM 88220

From: James B Campanella  
Member/Manager  
Judah Oil, LLC

Subject: Permission for Berry Hut with Specialty Permitting to conduct business for  
Judah Oil, LLC

Please except this letter as permission for Berry Hunt with Specialty Permitting to represent Judah Oil, LLC in our companies dealing with all BLM offices, including, but not limited to, filing of governmental paper work such as Category Determinations, Notice of Staking, Application for Permits to Drill, Sundry Notices, and Right of Way Applications.

I may be contacted at 575-748-4730 office, 575-748-5488 cell, or e-mail me at [jbc@judahoil.com](mailto:jbc@judahoil.com)

Thank You,



James B Campanella  
Member/Manager

PO Box 870  
1805 w Jacobs Ave  
Artesia, NM 88211-0870

Office: (575) 748-4730  
Fax: (575) 748-4731  
E-Mail: [judahoil@yahoo.com](mailto:judahoil@yahoo.com)

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## 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 the SPD/ReEntry 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/ReEntry Package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 14 day of October, 2014.

Name Judah Oil, LLC; James B. Campenella

Position Title Member/Manager

Address PO Box 568

Artesia, NM 88211-0568

Telephone (575)-748-4730 Office/ (575)-748-5488 Cell

Field Representative (If not above signatory)

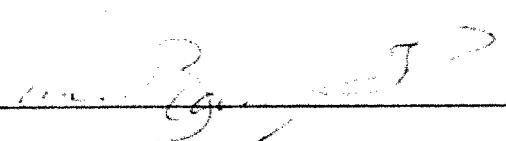
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Address (If different from above) \_\_\_\_\_

\_\_\_\_\_

Telephone (If different from above) \_\_\_\_\_

E-mail (optional) jbc@judahoil.com

  
\_\_\_\_\_

Signature



State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Susana Martinez**  
Governor

**David Martin**  
Cabinet Secretary

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

**David R. Catanach, Division Director**  
Oil Conservation Division



Administrative Order SWD-1533  
March 4, 2015

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Pursuant to the provisions of Division Rule 19.15.26.8B, NMAC, Judah Oil LLC (the "operator") seeks an administrative order for its proposed Pronghorn Federal SWD Well No. 1 with a proposed location 1980 feet from the South line and 660 feet from the East line, Unit letter I of Section 12, Township 21 South, Range 28 East, NMPM, Eddy County, New Mexico, for produced water disposal purposes.

**THE DIVISION DIRECTOR FINDS THAT:**

The application has been duly filed under the provisions of Division Rule 19.15.26.8B, NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received. The applicant has presented satisfactory evidence that all requirements prescribed in Rule 19.15.26.8 NMAC have been met and the operator is in compliance with Rule 19.15.5.9 NMAC.

**IT IS THEREFORE ORDERED THAT:**

The applicant, Judah Oil LLC (OGRID 245872) is hereby authorized to utilize its proposed Pronghorn Federal SWD Well No. 1 (API No. 30-015-20866) with a proposed location 1980 feet from the South line and 660 feet from the East line, Unit letter I of Section 12, Township 21 South, Range 28 East, NMPM, Eddy County, New Mexico, for disposal of oil field produced water (UIC Class II only) through an open hole interval within the Devonian, Fusselman, and Montoya formations from approximately 13760 feet to approximately 14750 feet. Injection shall occur through internally-coated tubing and a packer set a maximum of 100 feet above the top of the open-hole interval. *If the upper contact of the Ordovician Simpson group is encountered prior to the lower limit of the approved injection interval at 14750 feet, then the total depth of the well (and injection interval) shall be reduced to the upper contact of the Simpson group.* Injection will occur through internally-coated, 3 1/2-inch or smaller tubing and a packer set within 100 feet of the permitted interval.

**IT IS FURTHER ORDERED THAT:**

The operator shall take all steps necessary to ensure that the disposed water enters only the approved disposal interval and is not permitted to escape to other formations or onto the surface. This includes the well construction proposed and described in the application.



*The operator shall supply the Division with a copy of a mudlog over the permitted disposal interval and an estimated insitu water salinity based on open-hole logs. If significant hydrocarbon shows occur while drilling, the operator shall notify the Division's District II and the operator shall be required to receive written permission prior to commencing disposal.*

*Within one year after commencing disposal, the operator shall submit to the Division copies of an injection survey over the entire injection interval run on this well consisting of a temperature log, or equivalent, run under representative disposal rates.*

*The operator shall also include a cement bond log (CBL) (or equivalent) showing final top of cement for the 5 1/2 -inch liner, if it is not circulated to the surface. If the cement for the 8 5/8-inch casing is not circulated to surface, the operator shall run a CBL to determine the top of cement.*

*The operator shall also provide a summary of depths (picks) for formation tops in the injection interval to the Division's District II office prior to commencing disposal. If the final determination of formation tops (based on geophysical logs) does not correlate to the approved disposal interval, then the operator shall apply to amend the order for a corrected description prior to commencing disposal.*

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

The wellhead injection pressure on the well shall be limited to **no more than 2752 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well. The operator shall install and maintain a chart recorder showing casing and tubing pressures during disposal operations.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate Test.

The operator shall notify the supervisor of the Division's District office of the date and time of the installation of disposal equipment and of any MIT so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's District office. The operator shall submit monthly reports of the



disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's District office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon Division approval. The Division may require the operator to demonstrate mechanical integrity of any disposal well that will be transferred prior to approving transfer of authority to inject.

The Division may revoke this injection permit after notice and hearing if the operator is in violation of Rule 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two (2) years after the effective date of this order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.



DAVID R. CATANACH  
DIRECTOR

DRC/mam

cc: Oil Conservation Division – Artesia District Office  
Bureau of Land Management – Carlsbad Field Office



## PECOS DISTRICT CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>Judah Oil, LLC</b>
<b>LEASE NO.:</b>	<b>NMLC-067145</b>
<b>WELL NAME &amp; NO.:</b>	<b>Pronghorn Federal SWD 1</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>1980' FSL &amp; 0660' FEL</b>
<b>LOCATION:</b>	<b>Section 12, T. 21 S., R 28 E., NMPM</b>
<b>COUNTY:</b>	<b>Eddy County, New Mexico</b>

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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.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Lesser Prairie-Chicken Timing Stipulations
  - Below Ground-level Abandoned Well Marker
  - Cave/Karst
- ☐ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
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  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - Cement Requirements
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- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**



## **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.

**Below 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.

Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

### **Cave and Karst Conditions of Approval**

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

### **Cave/Karst Surface Mitigation**

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

#### **Construction:**

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

#### **No Blasting:**



No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

**Pad Berming:**

The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

**Tank Battery Liners and Berms:**

Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

**Leak Detection System:**

A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating valves and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

**Automatic Shut-off Systems:**

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

**Cave/Karst Subsurface Mitigation**

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

**Rotary Drilling with Fresh Water:**

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



**Directional Drilling:**

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

**Lost Circulation:**

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

**Abandonment Cementing:**

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

**Pressure Testing:**

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



## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

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

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

### **B. TOPSOIL**

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

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

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

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

### **D. FEDERAL MINERAL MATERIALS PIT**

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

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

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

### **F. EXCLOSURE FENCING (CELLARS & PITS)**



**Exclosure Fencing**

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

**G. ON LEASE ACCESS ROADS****Road Width**

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

**Surfacing**

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

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

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

**Crowning**

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

**Ditching**

Ditching shall be required on both sides of the road.

**Turnouts**

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

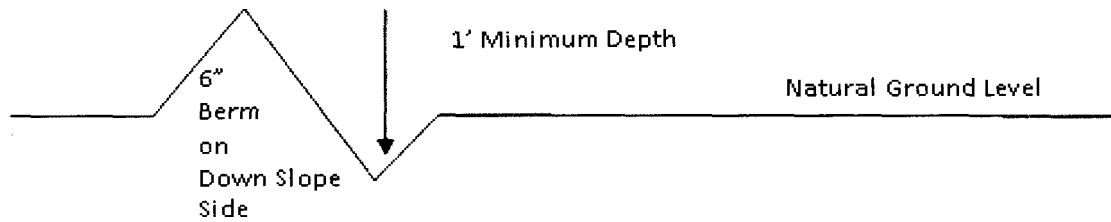
**Drainage**



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

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

#### **Cross Section of a Typical Lead-off Ditch**



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

#### **Formula for Spacing Interval of Lead-off Ditches**

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

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

#### **Cattleguards**

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

#### **Fence Requirement**

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

#### **Public Access**

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



## Construction Steps

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

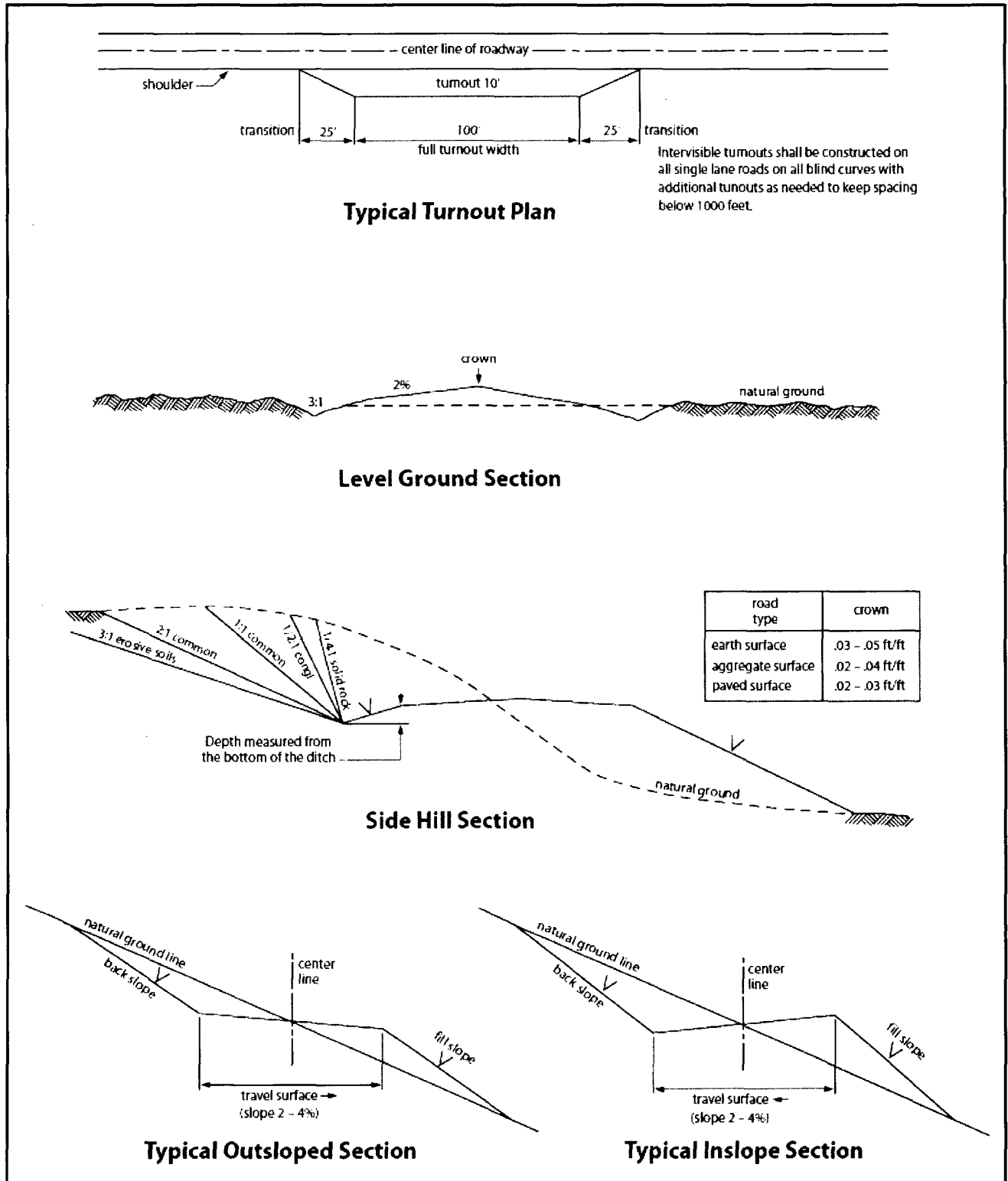


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.



## VII. DRILLING

### 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)

☒ **Eddy County**

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

1. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** 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. **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 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.

### **Capitan Reef**

#### **Medium Cave/Karst**

Possibility of water flows in the Capitan Reef, Salado, and Artesia Group.  
Possibility of lost circulation in the Rustler, Red Beds, Capitan Reef, and Delaware.  
High pressure may be encountered within the 3<sup>rd</sup> Bone Spring Sandstone and subsequent formations

1. The 11-3/4" surface casing is set at 475 feet with cement circulated to surface.
2. The 8-5/8" intermediate casing is set at 2982 feet with cement circulated to surface.

**A CIT is to be performed on the 8-5/8" casing per Onshore Oil and Gas Order 2.III.B.1.h prior to drilling the shoe plug.**

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

**Operator has proposed DV tool at depth of 8000', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.**

- a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

- b. Second stage above DV tool:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Excess calculates to 21% - Additional cement may be required.**

**Open hole from 13,760'-14,750'.**

4. 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. **Prior to drilling surface plug, the BOP is to be tested.** Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi. 10M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
3. 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.**
  - 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.
  - g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.



**D. DRILLING MUD**

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

**E. DRILL STEM TEST**

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

**F. WELL COMPLETION**

A NOI sundry with the completion procedure for this well shall be submitted and approved prior to commencing completion work. The procedure will be reviewed to verify that the completion proposal will allow the operator to:

1. Properly evaluate the injection zone utilizing (This well is considered a hydrocarbon producer until proven otherwise)
  - a. Swab testing shall be done in all cases.
  - b. In addition to swab testing the operator shall utilize other reservoir evaluation methods (i.e. evaluation of mud logs, petrophysical analysis of open-hole logs and formation water analysis from swab testing) to confirm that hydrocarbons cannot be produced in paying quantities. This evaluation summary report shall be reviewed by the BLM prior to injection commencing.
2. Restrict the injection fluid to the approved formation.
3. If a step rate test will be run an NOI sundry shall be submitted to the BLM for approval

If off-lease water will be disposed in this well, the operator shall provide proof of right-of-way approval.

**G. 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 100316**

**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.



**Exclosure Netting (Open-top Tanks)**

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

**Chemical and Fuel Secondary Containment and Exclosure Screening**

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

**Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

**Containment Structures**

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

**Painting Requirement**

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



## **B. PIPELINES**

### **BURIED PIPELINE STIPULATIONS**

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and



clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be 30 feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 30 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.



11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

- |  |  |
|--|--|
| <input type="checkbox"/> seed mixture 1                | <input type="checkbox"/> seed mixture 3          |
| <input type="checkbox"/> seed mixture 2                | <input type="checkbox"/> seed mixture 4          |
| <input checked="" type="checkbox"/> seed mixture 2/LPC | <input type="checkbox"/> Aplomado Falcon Mixture |

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder 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 will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. 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 associated roads, 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.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

19. Special Stipulations:

**Lesser Prairie-Chicken**

Oil and gas activities 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, geophysical exploration other than 3-D operations, and 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. 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 ft. from the source of the noise.

**C. ELECTRIC LINES**

**STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES**

**A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or



hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless



approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder 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 will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

**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, geophysical exploration other than 3-D operations, and 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 ft. from the source of the noise.

## **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).

Below 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 for LPC Sand/Shinnery Sites

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 shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). 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. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may 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:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

\*Pounds of pure live seed:

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