

OCD - HOBBS
09/14/2020
RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMLC0066438
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No. BELL LAKE / NMNM 068292X
2. Name of Operator KAISER FRANCIS OIL COMPANY [12361]		8. Lease Name and Well No. BELL LAKE UNIT NORTH [316707] 220H
3a. Address 6733 S. Yale Ave., Tulsa, OK 74121	3b. Phone No. (include area code) (918) 491-0000	9. API Well No. 30-025-47766
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWSW / 2508 FSL / 380 FWL / LAT 32.333321 / LONG -103.533404 At proposed prod. zone NWNW / 330 FNL / 1230 FWL / LAT 32.354537 / LONG -103.530658		10. Field and Pool, or Exploratory [98259] OJO CHISO; BONE SPRING, SOUTHWEST
14. Distance in miles and direction from nearest town or post office* 20 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 1/T23S/R33E/NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 380 feet		12. County or Parish LEA
16. No of acres in lease 479.85		13. State NM
17. Spacing Unit dedicated to this well 480.0		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 30 feet		20. BLM/BIA Bond No. in file FED: WYB000055
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3525 feet		22. Approximate date work will start* 06/01/2020
23. Estimated duration 40 days		
24. Attachments		

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

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 6. Such other site specific information and/or plans as may be requested by the BLM. |

25. Signature (Electronic Submission)	Name (Printed/Typed) MELANIE WILSON / Ph: (918) 491-0000	Date 01/20/2020
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575) 234-5959	Date 09/09/2020
Title Assistant Field Manager Lands & Minerals		
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.

GCP Rec 09/14/2020

SL

(Continued on page 2)

APPROVED WITH CONDITIONS
Approval Date: 09/09/2020

KZ
10/05/2020

*(Instructions on page 2)



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

Operator Certification Data Report

09/11/2020

Operator Certification

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

NAME: Melanie Wilson

Signed on: 01/15/2020

Title: Regulatory Analyst

Street Address: 106 W. Riverside Drive

City: Carlsbad

State: NM

Zip: 88220

Phone: (575)914-1461

Email address: nmogrservices@gmail.com

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:



APD ID: 10400053279

Submission Date: 01/20/2020

Highlighted data
reflects the most
recent changes

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

APD ID: 10400053279

Tie to previous NOS? N

Submission Date: 01/20/2020

BLM Office: CARLSBAD

User: Melanie Wilson

Title: Regulatory Analyst

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMLC0066438

Lease Acres: 479.85

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? YES

Federal or Indian agreement: FEDERAL

Agreement number: NMNM068292X

Agreement name: BELL LAKE

Keep application confidential? Y

Permitting Agent? YES

APD Operator: KAISER FRANCIS OIL COMPANY

Operator letter of designation:

Operator Info

Operator Organization Name: KAISER FRANCIS OIL COMPANY

Operator Address: 6733 S. Yale Ave.

Zip: 74121

Operator PO Box: PO Box 21468

Operator City: Tulsa

State: OK

Operator Phone: (918)491-0000

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: OJO CHISO

Pool Name: WOLFCAMP,
SOUTHWEST

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

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

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

Is the proposed well in a Helium production area? N

Use Existing Well Pad? N

New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name:

Number: 1

Well Class: HORIZONTAL

NORTH BELL LAKE UNIT

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 20 Miles

Distance to nearest well: 30 FT

Distance to lease line: 380 FT

Reservoir well spacing assigned across Measurement: 480 Acres

Well plat: BLUN_220H_C102_20200115100433.pdf

BLUN_220H_Pymt_20200115105709.pdf

Well work start Date: 06/01/2020

Duration: 40 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: 7069

Reference Datum: GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	2508	FSL	380	FWL	23S	33E	1	Aliquot NWS W	32.333321	-103.533404	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0066438	3525	0	0	N
KOP Leg #1	2508	FSL	380	FWL	23S	33E	1	Aliquot NWS W	32.333321	-103.533404	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0066438	-6332	9900	9857	N

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-1	2600	FNL	1240	FWL	23S	33E	1	Aliquot SWN W	32.333783	- 103.530621	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0066438	- 7268	11280	10793	Y
PPP Leg #1-2	0	FSL	1230	FWL	22S	33E	36	Aliquot SWS W	32.340929	- 103.530634	LEA	NEW MEXICO	NEW MEXICO	S	STATE	- 7268	13880	10793	Y
EXIT Leg #1	330	FNL	1230	FWL	22S	33E	36	Aliquot NWN W	32.354537	- 103.530658	LEA	NEW MEXICO	NEW MEXICO	S	STATE	- 7268	18830	10793	Y
BHL Leg #1	330	FNL	1230	FWL	22S	33E	36	Aliquot NWN W	32.354537	- 103.530658	LEA	NEW MEXICO	NEW MEXICO	S	STATE	- 7268	18830	10793	Y

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLUN_420H_Csg_Assumptions_20200115145255.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLUN_420H_Csg_Assumptions_20200115145240.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLUN_220H_Prod_Csg_Specs_20200115101704.pdf

Section 4 - Cement

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1350	730	1.7	13.5	1275	75	HALCEM	4% Bentonite
SURFACE	Tail		0	1350	300	1.3	14.8	400	75	Halcem	0.125 #/sk Poly Flake
INTERMEDIATE	Lead		0	5216	1000	2.1	12.5	2089	75	EconoCem	3#/sk Kol Seal
INTERMEDIATE	Tail		0	5216	383	1.3	14.8	510	75	Halcem	none
PRODUCTION	Lead		4000	1883 0	349	3.5	10.5	1217	15	NeoCem	2#/sk Kol Seal
PRODUCTION	Tail		4000	1883 0	2060	1.2	14.5	2519	10	Versacem	none

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all time.

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
5200	1079 3	OIL-BASED MUD	8.7	8.9							
1350	5200	OTHER : Diesel- Brine Emulsion	8.7	8.9							
0	1350	OTHER : Fresh Water	8.4	9							

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

Section 6 - Test, Logging, Coring

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

Top of cement on production casing will be determined by calculation.

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

DIRECTIONAL SURVEY, GAMMA RAY LOG, MUD LOG/GEOLOGIC LITHOLOGY LOG, MUD LOG/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

None planned

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4995

Anticipated Surface Pressure: 2620

Anticipated Bottom Hole Temperature(F): 165

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

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

BLUN_H2S_Plan_20200114113955.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

BLUN_220H_Directional_Plan_20200115103857.pdf

Other proposed operations facets description:

Gas Capture Plan attached

Other proposed operations facets attachment:

BLUN_220H_GCP_20200115103935.pdf

Other Variance attachment:

BLUN_220H_Wellhead_20200115104014.pdf

BLUN_220H_Flex_Hose_20200115104033.pdf

Kaiser-Francis Oil Company
Bell Lake Unit North 419H
Casing Assumptions

Interval	Length	Casing Size	Weight (#/ft)	Grade	Thread	Condition	Hole Size	TVD (ft)	Mud Type	Mud Weight Hole Control	Depth	Viscosity	Fluid Loss	Anticipated Mud Weight (ppg)	Max Pore Pressure (psi)	Collapse (psi)	Burst (psi)	Body Tensile Strength	Joint Tensile Strength	Collapse Safety Factor (Min 1.1)	Burst Safety Factor (Min 1.0)	Body Tensile Safety Factor (Min 1.8)	Joint Tensile Safety Factor (Min 1.8)
Conductor	120	20"				New		120															
Surface	1600	10-3/4"	40.5	J-55	STC	New	14-3/4"	1600	FW	8.4 - 9.0	1350'	32 - 34	NC	9	749	1580	3130	629000	420000	2.1	4.2	9.7	6.5
Intermediate	11421	7-5/8"	29.7	HCP110	LTC	New	9-7/8"	11378	Brine	8.7 - 9.0	11426'	28-29	NC	9	5325	6700	9460	940000	769000	1.3	1.8	2.8	2.3
Production	19997	5-1/2"	20	P110 HP	USS Eagle SFH	New	6-3/4"	12073	OBM	10.0-12.0	19882'	55-70		12	7534	13150	14360	729000	629000	1.7	1.9	3.0	2.6

**KAISER-FRANCIS OIL COMPANY
HYDROGEN SULFIDE (H₂S) CONTINGENCY PLAN
FOR DRILLING/COMPLETION WORKOVER/FACILITY**

**Bell Lake Unit North
SECTION 1 -T23S-R33E
SECTION 6 -T23S-R34E
SECTION 5 -T23S-R34E**

LEA COUNTY, NM

This well/facility is not expected to have H₂S, but due to the sensitive location, the following is submitted as requested.

TABLE OF CONTENTS

Emergency Response Activation and General Responsibilities	3
Individual Responsibilities During An H ₂ S Release	4
Procedure For Igniting An Uncontrollable Condition	5
Emergency Phone Numbers	6
Protection Of The General Public/Roe	7
Characteristics Of H ₂ S And SO ₂	8
Training	8
Public Relations	8
Maps	

EMERGENCY RESPONSE ACTIVATION AND GENERAL RESPONSIBILITIES

Activation of the Emergency Action Plan

In the event of any emergency situation, all personnel on location should first ensure that the following items are initiated. After that, they should refer to the appropriate Specific Emergency Guidance sections below for further responsibilities:

1. Notify the senior ranking contract representative on site.
2. Notify Kaiser-Francis representative in charge.
3. Notify civil authorities if the Kaiser-Francis Representative cannot be contacted and the situation dictates.
4. Perform rescue and first aid as required (without jeopardizing additional personnel).

General Responsibilities

In the event of an H₂S emergency, the following plan will be initiated.

- 1) All personnel will immediately evacuate to an up-wind and if possible up-hill "safe area".
- 2) If for any reason a person must enter the hazardous area, they must wear a SCBA (Self contained breathing apparatus).
- 3) Always use the "buddy system".
- 4) Isolate the well/problem if possible.
- 5) Account for all personnel
- 6) Display the proper colors, warning all unsuspecting personnel of the danger at hand
- 7) Contact the Company personnel as soon as possible if not at the location. (use the enclosed call list as instructed)

At this point the company representative will evaluate the situation and coordinate the necessary duties to bring the situation under control, and if necessary, the notification of emergency response agencies and residents.

INDIVIDUAL RESPONSIBILITIES DURING AN H₂S RELEASE

The following procedures and responsibilities will be implemented on activation of the H₂S siren and lights.

All Personnel:

1. On alarm, don escape unit (if available) and report to upwind briefing area.

Rig Manager/Tool Pusher:

1. Check that all personnel are accounted for and their condition.
2. Administer or arrange for first aid treatment, and/or call EMTs as needed.
3. Identify two people best suited to secure well and perform rescue, and instruct them to don SCBA.
4. Notify Contract management and Kaiser-Francis Representative.
5. Remain at the briefing area, assess and monitor personnel and overall situation for hazards or conditions that might warrant a change in the action plan.

Two People Responsible for Shut-in and Rescue:

1. Don SCBA and acquire tools to secure well and perform rescue, i.e., wrenches, retrieval ropes, etc.
2. Utilize the buddy system to secure well and perform rescue(s).
3. Return to the briefing area and stand by for further instructions.

All Other Personnel:

1. Isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

Kaiser-Francis Oil Company Representative:

1. Remain at the briefing area, assess and monitor personnel and overall situation for hazards or conditions that might warrant a change in the action plan.
2. Notify company management or Local Incident Commander, and Police, Fire Department, or other local emergency services as required.

PROCEDURE FOR IGNITING AN UNCONTROLLABLE CONDITION:

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police shall be the Incident Command of any major release.

The decision to ignite a well should be a last resort and one if not both of the following pertain.

- 1) Human life and/or property are in danger.
- 2) There is no hope of bringing the situation under control with the prevailing conditions at the site.

INSTRUCTIONS FOR IGNITION:

- 1) Two people are required. They must be equipped with positive pressure; self contained breathing apparatus and a "D"-ring style, full body, OSHA approved safety harness. Non-flammable rope will be attached.
- 2) One of the people will be a qualified safety person who will test the atmosphere for H₂S, Oxygen, & LFL. The other person will be the company supervisor; he is responsible for igniting the well.
- 3) Ignite up-wind from a distance no closer than necessary. Make sure that where you ignite from has the maximum escape avenue available. A 25mm flare gun shall be used, with a +/-500' range to ignite the gas.
- 4) Prior to ignition, make a final check for combustible gases.
- 5) Following ignition, continue with the emergency actions & procedures as before.

CONTACTING AUTHORITIES

Kaiser-Francis 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. The following call list of essential and potential responders has been prepared for use during a release. This response plan must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER).

EMERGENCY CALL LIST: (Start and continue until ONE of these people have been reached)

	<u>OFFICE</u>	<u>MOBILE</u>
Kaiser-Francis Oil Co.	918/494-0000	
Bill Wilkinson	580/668-2335	580/221-4637
David Zerger	918/491-4350	918/557-6708
Charles Lock	918/491-4337	918/671-6510
Stuart Blake	918/491-4347	918/510-4126
Robert Sanford	918/491-4201	918/770-2682
Eric Hansen	918/491-4339	918/527-5260

EMERGENCY RESPONSE NUMBERS: Lea County, New Mexico

State Police – Artesia	575/748-9718
State Police – Hobbs	575/392-5580
State Police – Carlsbad	575/885-3138
Lea County Sheriff - Lovington	575/396-3611
Local Emergency Planning Center – Lea County	575/396-8607
Local Emergency Planning Center – Eddy County	575/885-3581
Fire Fighting, Rescue & Ambulance – Carlsbad	911 or 575/885-3125
Fire Fighting, Rescue & Ambulance – Hobbs	911 or 575/397-9308
Fire Fighting – Jal Volunteer Fire Department	911 or 505/395-2221
New Mexico Oil & Gas Commission – Artesia	575/748-1283
New Mexico Oil & Gas Commission – Hobbs	575/393-6161
Air Medical Transport Services – Hobbs	800/550-1025
Med Flight Air Ambulance – Albuquerque	505/842-4433
Angel MedFlight	844/553-9033
DXP	432/580-3770
BJ Services	575/392-5556
Halliburton	575/392-6531 800/844-8451

PROTECTION OF THE GENERAL PUBLIC/ROE:

In the event of a release with a concentration greater than 100 ppm H₂S, the ROE (Radius of Exposure) calculations will be done to determine if the following conditions have been met:

- Does the 100 ppm ROE include any public area (any place not associated with this site)
- Does the 500 ppm ROE include any public road (any road which the general public may travel)
- Is the 100 ppm ROE equal to or greater than 3000 feet

If any one of these conditions have been met then the Contingency Plan will be implemented. The following shows how to calculate the radius of exposure and an example.

Calculation for the 100 ppm ROE:

$$X = [(1.589)(\text{concentration})(Q)]^{(0.6258)}$$

(H₂S concentrations in decimal form)

10,000 ppm +=1.+

1,000 ppm +=.1+

100 ppm +=.01+

10 ppm +=.001+

Calculation for the 500 ppm ROE:

$$X+[(0.4546)(\text{concentration})(Q)]^{(0.6258)}$$

EXAMPLE: If a well/facility has been determined to have 150 ppm H₂S in the gas mixture and the well/facility is producing at a gas rate of 200 MCFPD then:

ROE for 100 PPM $X=[(1.589)(.0150)(200)]^{(0.6258)}$

$$X=2.65'$$

ROE for 500 PPM $X=[(.4546)(.0150)(200)]^{(0.6258)}$

$$X=1.2'$$

(These calculations will be forwarded to the appropriate District NMOCD office when applicable.)

PUBLIC EVACUATION PLAN:

(When the supervisor has determined that the General Public will be involved, the following plan will be implemented)

- 1) Notification of the emergency response agencies of the hazardous condition and Implement evacuation procedures.
- 2) A trained person in H₂S safety, shall monitor with detection equipment the H₂S Concentration, wind and area of exposure (ROE). This person will determine the outer perimeter of the hazardous area. The extent of the evacuation area will be determined from the data being collected. Monitoring shall continue until the situation has been resolved. **(All monitoring equipment will be UL approved, for use in class I groups A,B,C & D, Division I, hazardous locations. All monitors will have a minimum capability of measuring H₂S, oxygen, and flammable values.)**
- 3) Law enforcement shall be notified to set up necessary barriers and maintain such for the duration of the situation as well as aid in the evacuation procedure.
- 4) The company supervising personnel shall stay in communication with all agencies through out the duration of the situation and inform such agencies when the situation has been contained and the effected area(s) is safe to enter.

CHARACTERISTICS OF H₂S AND SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air = 1	10 ppm	100 ppm	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air = 1	2 ppm	N/A	1000 ppm

TRAINING:

All responders must have training in the detection of H₂S measures for protection against the gas, equipment used for protection and emergency response. Weekly drills by all crews will be conducted and recorded in the IADC daily log. Additionally, responders must be equipped with H₂S monitors at all times.

PUBLIC RELATIONS

Kaiser-Francis recognizes that the news media have a legitimate interest in incidents at Kaiser-Francis facilities that could affect the public. It is to the company's benefit to cooperate with the news media when incidents occur because these media are our best liaison with the public.

Our objective is to see that all reports of any emergency are factual and represent the company's position fairly and accurately. Cooperation with news media representatives is the most reliable guarantee that this objective will be met.

All contract and Kaiser-Francis employees are instructed **NOT** to make any statement to the media concerning the emergency incident. If a media representative contacts any employee, they should refer them to the designated Emergency Command Center where they should contact the Incident Commander or his designated relief for any information concerning the incident.



Kaiser Francis

Bell Lake Unit North 220H
Bell Lake Unit North 220H
Bell Lake Unit North 220H
Bell Lake Unit North 220H

Plan: 191212 Bell Lake Unit North 220H

Morcor Standard Plan

12 December, 2019

Morcor Engineering
Morcor Standard Plan



Company:	Kaiser Francis	Local Co-ordinate Reference:	Well Bell Lake Unit North 220H
Project:	Bell Lake Unit North 220H	TVD Reference:	WELL @ 3547.7usft (Original Well Elev)
Site:	Bell Lake Unit North 220H	MD Reference:	WELL @ 3547.7usft (Original Well Elev)
Well:	Bell Lake Unit North 220H	North Reference:	Grid
Wellbore:	Bell Lake Unit North 220H	Survey Calculation Method:	Minimum Curvature
Design:	191212 Bell Lake Unit North 220H	Database:	EDM 5000.1 Single User Db

Project	Bell Lake Unit North 220H		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Bell Lake Unit North 220H		
Site Position:		Northing:	485,917.07 usft
From:	Map	Easting:	788,407.97 usft
Position Uncertainty:	1.0 usft	Slot Radius:	17-1/2 "
		Latitude:	32° 19' 59.959 N
		Longitude:	103° 32' 0.258 W
		Grid Convergence:	0.43 °

Well	Bell Lake Unit North 220H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	1.0 usft		Wellhead Elevation:
			usft
			Latitude:
			32° 19' 59.959 N
			Longitude:
			103° 32' 0.258 W
			Ground Level:
			3,525.7 usft

Wellbore	Bell Lake Unit North 220H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/12/2019	6.52	60.07	47,835

Design	191212 Bell Lake Unit North 220H			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	5.84

Survey Tool Program	Date	12/12/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	18,830.7	191212 Bell Lake Unit North 220H (Bell La	MWD	MWD - Standard	

Morcor Engineering
Morcor Standard Plan



Company:	Kaiser Francis	Local Co-ordinate Reference:	Well Bell Lake Unit North 220H
Project:	Bell Lake Unit North 220H	TVD Reference:	WELL @ 3547.7usft (Original Well Elev)
Site:	Bell Lake Unit North 220H	MD Reference:	WELL @ 3547.7usft (Original Well Elev)
Well:	Bell Lake Unit North 220H	North Reference:	Grid
Wellbore:	Bell Lake Unit North 220H	Survey Calculation Method:	Minimum Curvature
Design:	191212 Bell Lake Unit North 220H	Database:	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
0.0	0.00	0.00	0.0	-3,547.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
100.0	0.00	0.00	100.0	-3,447.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
120.0	0.00	0.00	120.0	-3,427.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
20" Conductor										
200.0	0.00	0.00	200.0	-3,347.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
300.0	0.00	0.00	300.0	-3,247.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
400.0	0.00	0.00	400.0	-3,147.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
500.0	0.00	0.00	500.0	-3,047.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
600.0	0.00	0.00	600.0	-2,947.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
700.0	0.00	0.00	700.0	-2,847.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
800.0	0.00	0.00	800.0	-2,747.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
900.0	0.00	0.00	900.0	-2,647.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
1,000.0	0.00	0.00	1,000.0	-2,547.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
1,100.0	0.00	0.00	1,100.0	-2,447.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
1,200.0	0.00	0.00	1,200.0	-2,347.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
1,248.0	0.00	0.00	1,248.0	-2,299.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
Rusiter										
1,300.0	0.00	0.00	1,300.0	-2,247.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
1,350.0	0.00	0.00	1,350.0	-2,197.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
13 3/8" Surface Casing										
1,400.0	0.00	0.00	1,400.0	-2,147.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
1,500.0	0.00	0.00	1,500.0	-2,047.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
1,600.0	0.00	0.00	1,600.0	-1,947.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
1,645.0	0.00	0.00	1,645.0	-1,902.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
Salado										
1,700.0	0.00	0.00	1,700.0	-1,847.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
1,800.0	0.00	0.00	1,800.0	-1,747.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00
1,900.0	0.00	0.00	1,900.0	-1,647.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00

Morcor Engineering
Morcor Standard Plan



Company:	Kaiser Francis	Local Co-ordinate Reference:	Well Bell Lake Unit North 220H
Project:	Bell Lake Unit North 220H	TVD Reference:	WELL @ 3547.7usft (Original Well Elev)
Site:	Bell Lake Unit North 220H	MD Reference:	WELL @ 3547.7usft (Original Well Elev)
Well:	Bell Lake Unit North 220H	North Reference:	Grid
Wellbore:	Bell Lake Unit North 220H	Survey Calculation Method:	Minimum Curvature
Design:	191212 Bell Lake Unit North 220H	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
1,972.0	0.00	0.00	1,972.0	-1,575.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00	
Top of Salt											
2,000.0	0.00	0.00	2,000.0	-1,547.7	0.0	0.0	788,407.97	485,917.07	0.00	0.00	
Start Build 3.00											
2,100.0	3.00	130.00	2,100.0	-1,447.7	-1.7	2.0	788,409.98	485,915.39	-1.47	3.00	
2,200.0	6.00	130.00	2,199.6	-1,348.1	-6.7	8.0	788,415.98	485,910.34	-5.87	3.00	
Start 7700.0 hold at 2200.0 MD											
2,300.0	6.00	130.00	2,299.1	-1,248.6	-13.4	16.0	788,423.99	485,903.63	-11.74	0.00	
2,400.0	6.00	130.00	2,398.5	-1,149.2	-20.2	24.0	788,432.00	485,896.91	-17.61	0.00	
2,500.0	6.00	130.00	2,498.0	-1,049.7	-26.9	32.0	788,440.01	485,890.19	-23.48	0.00	
2,600.0	6.00	130.00	2,597.4	-950.3	-33.6	40.0	788,448.01	485,883.47	-29.35	0.00	
2,700.0	6.00	130.00	2,696.9	-850.8	-40.3	48.1	788,456.02	485,876.75	-35.22	0.00	
2,800.0	6.00	130.00	2,796.3	-751.4	-47.0	56.1	788,464.03	485,870.03	-41.09	0.00	
2,900.0	6.00	130.00	2,895.8	-651.9	-53.8	64.1	788,472.04	485,863.31	-46.96	0.00	
3,000.0	6.00	130.00	2,995.3	-552.4	-60.5	72.1	788,480.04	485,856.59	-52.83	0.00	
3,100.0	6.00	130.00	3,094.7	-453.0	-67.2	80.1	788,488.05	485,849.87	-58.70	0.00	
3,200.0	6.00	130.00	3,194.2	-353.5	-73.9	88.1	788,496.06	485,843.16	-64.56	0.00	
3,300.0	6.00	130.00	3,293.6	-254.1	-80.6	96.1	788,504.07	485,836.44	-70.43	0.00	
3,400.0	6.00	130.00	3,393.1	-154.6	-87.4	104.1	788,512.07	485,829.72	-76.30	0.00	
3,500.0	6.00	130.00	3,492.5	-55.2	-94.1	112.1	788,520.08	485,823.00	-82.17	0.00	
3,600.0	6.00	130.00	3,592.0	44.3	-100.8	120.1	788,528.09	485,816.28	-88.04	0.00	
3,700.0	6.00	130.00	3,691.4	143.7	-107.5	128.1	788,536.09	485,809.56	-93.91	0.00	
3,800.0	6.00	130.00	3,790.9	243.2	-114.2	136.1	788,544.10	485,802.84	-99.78	0.00	
3,900.0	6.00	130.00	3,890.3	342.6	-120.9	144.1	788,552.11	485,796.12	-105.65	0.00	
4,000.0	6.00	130.00	3,989.8	442.1	-127.7	152.1	788,560.12	485,789.40	-111.52	0.00	
4,100.0	6.00	130.00	4,089.2	541.5	-134.4	160.2	788,568.12	485,782.68	-117.39	0.00	
4,200.0	6.00	130.00	4,188.7	641.0	-141.1	168.2	788,576.13	485,775.97	-123.25	0.00	

Morcor Engineering
Morcor Standard Plan



Company:	Kaiser Francis	Local Co-ordinate Reference:	Well Bell Lake Unit North 220H
Project:	Bell Lake Unit North 220H	TVD Reference:	WELL @ 3547.7usft (Original Well Elev)
Site:	Bell Lake Unit North 220H	MD Reference:	WELL @ 3547.7usft (Original Well Elev)
Well:	Bell Lake Unit North 220H	North Reference:	Grid
Wellbore:	Bell Lake Unit North 220H	Survey Calculation Method:	Minimum Curvature
Design:	191212 Bell Lake Unit North 220H	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
4,300.0	6.00	130.00	4,288.1	740.4	-147.8	176.2	788,584.14	485,769.25	-129.12	0.00	
4,400.0	6.00	130.00	4,387.6	839.9	-154.5	184.2	788,592.15	485,762.53	-134.99	0.00	
4,500.0	6.00	130.00	4,487.0	939.3	-161.3	192.2	788,600.15	485,755.81	-140.86	0.00	
4,600.0	6.00	130.00	4,586.5	1,038.8	-168.0	200.2	788,608.16	485,749.09	-146.73	0.00	
4,700.0	6.00	130.00	4,685.9	1,138.2	-174.7	208.2	788,616.17	485,742.37	-152.60	0.00	
4,800.0	6.00	130.00	4,785.4	1,237.7	-181.4	216.2	788,624.18	485,735.65	-158.47	0.00	
4,900.0	6.00	130.00	4,884.8	1,337.1	-188.1	224.2	788,632.18	485,728.93	-164.34	0.00	
4,987.6	6.00	130.00	4,972.0	1,424.3	-194.0	231.2	788,639.20	485,723.04	-169.48	0.00	
Base of Salt											
5,000.0	6.00	130.00	4,984.3	1,436.6	-194.9	232.2	788,640.19	485,722.21	-170.21	0.00	
5,100.0	6.00	130.00	5,083.7	1,536.0	-201.6	240.2	788,648.20	485,715.50	-176.08	0.00	
5,200.0	6.00	130.00	5,183.2	1,635.5	-208.3	248.2	788,656.21	485,708.78	-181.94	0.00	
5,216.9	6.00	130.00	5,200.0	1,652.3	-209.4	249.6	788,657.56	485,707.64	-182.94	0.00	
9 5/8" Intermediate Casing											
5,239.0	6.00	130.00	5,222.0	1,674.3	-210.9	251.4	788,659.33	485,706.15	-184.23	0.00	
Lamar											
5,300.0	6.00	130.00	5,282.7	1,735.0	-215.0	256.2	788,664.21	485,702.06	-187.81	0.00	
5,400.0	6.00	130.00	5,382.1	1,834.4	-221.7	264.2	788,672.22	485,695.34	-193.68	0.00	
5,500.0	6.00	130.00	5,481.6	1,933.9	-228.5	272.3	788,680.23	485,688.62	-199.55	0.00	
5,540.7	6.00	130.00	5,522.0	1,974.3	-231.2	275.5	788,683.48	485,685.89	-201.94	0.00	
Cherry Canyon											
5,600.0	6.00	130.00	5,581.0	2,033.3	-235.2	280.3	788,688.23	485,681.90	-205.42	0.00	
5,700.0	6.00	130.00	5,680.5	2,132.8	-241.9	288.3	788,696.24	485,675.18	-211.29	0.00	
5,800.0	6.00	130.00	5,779.9	2,232.2	-248.6	296.3	788,704.25	485,668.46	-217.16	0.00	
5,900.0	6.00	130.00	5,879.4	2,331.7	-255.3	304.3	788,712.26	485,661.74	-223.03	0.00	
6,000.0	6.00	130.00	5,978.8	2,431.1	-262.0	312.3	788,720.26	485,655.02	-228.90	0.00	
6,100.0	6.00	130.00	6,078.3	2,530.6	-268.8	320.3	788,728.27	485,648.31	-234.77	0.00	

Morcor Engineering
Morcor Standard Plan



Company:	Kaiser Francis	Local Co-ordinate Reference:	Well Bell Lake Unit North 220H
Project:	Bell Lake Unit North 220H	TVD Reference:	WELL @ 3547.7usft (Original Well Elev)
Site:	Bell Lake Unit North 220H	MD Reference:	WELL @ 3547.7usft (Original Well Elev)
Well:	Bell Lake Unit North 220H	North Reference:	Grid
Wellbore:	Bell Lake Unit North 220H	Survey Calculation Method:	Minimum Curvature
Design:	191212 Bell Lake Unit North 220H	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
6,200.0	6.00	130.00	6,177.7	2,630.0	-275.5	328.3	788,736.28	485,641.59	-240.64	0.00	
6,300.0	6.00	130.00	6,277.2	2,729.5	-282.2	336.3	788,744.29	485,634.87	-246.50	0.00	
6,400.0	6.00	130.00	6,376.6	2,828.9	-288.9	344.3	788,752.29	485,628.15	-252.37	0.00	
6,500.0	6.00	130.00	6,476.1	2,928.4	-295.6	352.3	788,760.30	485,621.43	-258.24	0.00	
6,600.0	6.00	130.00	6,575.5	3,027.8	-302.4	360.3	788,768.31	485,614.71	-264.11	0.00	
6,700.0	6.00	130.00	6,675.0	3,127.3	-309.1	368.3	788,776.32	485,607.99	-269.98	0.00	
6,747.3	6.00	130.00	6,722.0	3,174.3	-312.3	372.1	788,780.10	485,604.82	-272.75	0.00	
Bell Canyon											
6,800.0	6.00	130.00	6,774.4	3,226.7	-315.8	376.4	788,784.32	485,601.27	-275.85	0.00	
6,900.0	6.00	130.00	6,873.9	3,326.2	-322.5	384.4	788,792.33	485,594.55	-281.72	0.00	
7,000.0	6.00	130.00	6,973.3	3,425.6	-329.2	392.4	788,800.34	485,587.83	-287.59	0.00	
7,100.0	6.00	130.00	7,072.8	3,525.1	-336.0	400.4	788,808.34	485,581.12	-293.46	0.00	
7,200.0	6.00	130.00	7,172.2	3,624.5	-342.7	408.4	788,816.35	485,574.40	-299.33	0.00	
7,300.0	6.00	130.00	7,271.7	3,724.0	-349.4	416.4	788,824.36	485,567.68	-305.19	0.00	
7,400.0	6.00	130.00	7,371.1	3,823.4	-356.1	424.4	788,832.37	485,560.96	-311.06	0.00	
7,500.0	6.00	130.00	7,470.6	3,922.9	-362.8	432.4	788,840.37	485,554.24	-316.93	0.00	
7,600.0	6.00	130.00	7,570.1	4,022.4	-369.5	440.4	788,848.38	485,547.52	-322.80	0.00	
7,700.0	6.00	130.00	7,669.5	4,121.8	-376.3	448.4	788,856.39	485,540.80	-328.67	0.00	
7,800.0	6.00	130.00	7,769.0	4,221.3	-383.0	456.4	788,864.40	485,534.08	-334.54	0.00	
7,900.0	6.00	130.00	7,868.4	4,320.7	-389.7	464.4	788,872.40	485,527.36	-340.41	0.00	
8,000.0	6.00	130.00	7,967.9	4,420.2	-396.4	472.4	788,880.41	485,520.65	-346.28	0.00	
8,100.0	6.00	130.00	8,067.3	4,519.6	-403.1	480.4	788,888.42	485,513.93	-352.15	0.00	
8,200.0	6.00	130.00	8,166.8	4,619.1	-409.9	488.5	788,896.43	485,507.21	-358.02	0.00	
8,300.0	6.00	130.00	8,266.2	4,718.5	-416.6	496.5	788,904.43	485,500.49	-363.88	0.00	
8,400.0	6.00	130.00	8,365.7	4,818.0	-423.3	504.5	788,912.44	485,493.77	-369.75	0.00	
8,457.6	6.00	130.00	8,423.0	4,875.3	-427.2	509.1	788,917.06	485,489.90	-373.14	0.00	
Brushy Canyon											

Morcor Engineering
Morcor Standard Plan



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Project:	Bell Lake Unit North 220H	TVD Reference:	WELL @ 3547.7usft (Original Well Elev)
Site:	Bell Lake Unit North 220H	MD Reference:	WELL @ 3547.7usft (Original Well Elev)
Well:	Bell Lake Unit North 220H	North Reference:	Grid
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Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
8,500.0	6.00	130.00	8,465.1	4,917.4	-430.0	512.5	788,920.45	485,487.05	-375.62	0.00
8,600.0	6.00	130.00	8,564.6	5,016.9	-436.7	520.5	788,928.45	485,480.33	-381.49	0.00
8,682.9	6.00	130.00	8,647.0	5,099.3	-442.3	527.1	788,935.09	485,474.76	-386.36	0.00
Bone Spring										
8,700.0	6.00	130.00	8,664.0	5,116.3	-443.5	528.5	788,936.46	485,473.61	-387.36	0.00
8,800.0	6.00	130.00	8,763.5	5,215.8	-450.2	536.5	788,944.47	485,466.89	-393.23	0.00
8,900.0	6.00	130.00	8,862.9	5,315.2	-456.9	544.5	788,952.48	485,460.17	-399.10	0.00
9,000.0	6.00	130.00	8,962.4	5,414.7	-463.6	552.5	788,960.48	485,453.46	-404.97	0.00
9,047.9	6.00	130.00	9,010.0	5,462.3	-466.8	556.3	788,964.32	485,450.24	-407.78	0.00
Avalon										
9,100.0	6.00	130.00	9,061.8	5,514.1	-470.3	560.5	788,968.49	485,446.74	-410.84	0.00
9,200.0	6.00	130.00	9,161.3	5,613.6	-477.1	568.5	788,976.50	485,440.02	-416.71	0.00
9,300.0	6.00	130.00	9,260.7	5,713.0	-483.8	576.5	788,984.51	485,433.30	-422.57	0.00
9,400.0	6.00	130.00	9,360.2	5,812.5	-490.5	584.5	788,992.51	485,426.58	-428.44	0.00
9,500.0	6.00	130.00	9,459.6	5,911.9	-497.2	592.6	789,000.52	485,419.86	-434.31	0.00
9,600.0	6.00	130.00	9,559.1	6,011.4	-503.9	600.6	789,008.53	485,413.14	-440.18	0.00
9,700.0	6.00	130.00	9,658.5	6,110.8	-510.6	608.6	789,016.54	485,406.42	-446.05	0.00
9,800.0	6.00	130.00	9,758.0	6,210.3	-517.4	616.6	789,024.54	485,399.70	-451.92	0.00
9,900.0	6.00	130.00	9,857.5	6,309.8	-524.1	624.6	789,032.55	485,392.98	-457.79	0.00
Start DLS 10.00 TFO -9.50										
10,000.0	15.95	124.01	9,955.5	6,407.8	-535.2	640.0	789,047.98	485,381.91	-467.23	10.00
10,020.6	18.00	123.59	9,975.2	6,427.5	-538.5	645.0	789,052.97	485,378.58	-470.04	10.00
Start DLS 7.94 TFO -122.79										
10,044.5	17.04	118.13	9,998.0	6,450.3	-542.2	651.2	789,059.14	485,374.88	-473.10	7.94
1st BS Sand										
10,100.0	15.49	103.36	10,051.3	6,503.6	-547.7	665.6	789,073.53	485,369.33	-477.15	7.94
10,200.0	15.63	73.46	10,147.8	6,600.1	-547.0	691.5	789,099.48	485,370.08	-473.76	7.94
10,300.0	19.29	49.70	10,243.3	6,695.6	-532.5	717.1	789,125.04	485,384.62	-456.70	7.94

Morcor Engineering
Morcor Standard Plan



Company:	Kaiser Francis	Local Co-ordinate Reference:	Well Bell Lake Unit North 220H
Project:	Bell Lake Unit North 220H	TVD Reference:	WELL @ 3547.7usft (Original Well Elev)
Site:	Bell Lake Unit North 220H	MD Reference:	WELL @ 3547.7usft (Original Well Elev)
Well:	Bell Lake Unit North 220H	North Reference:	Grid
Wellbore:	Bell Lake Unit North 220H	Survey Calculation Method:	Minimum Curvature
Design:	191212 Bell Lake Unit North 220H	Database:	EDM 5000.1 Single User Db

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
10,400.0	24.96	34.79	10,336.0	6,788.3	-504.4	741.7	789,149.71	485,412.67	-426.28	7.94
10,500.0	31.57	25.45	10,424.0	6,876.3	-463.4	765.1	789,173.03	485,453.70	-383.09	7.94
10,600.0	38.64	19.15	10,505.8	6,958.1	-410.2	786.6	789,194.55	485,506.91	-327.96	7.94
10,622.3	40.25	18.01	10,523.0	6,975.3	-396.8	791.1	789,199.06	485,520.32	-314.17	7.94
2nd BS Sand										
10,700.0	45.96	14.56	10,579.7	7,032.0	-345.8	805.9	789,213.86	485,571.30	-261.95	7.94
10,800.0	53.42	11.00	10,644.4	7,096.7	-271.5	822.6	789,230.58	485,645.62	-186.31	7.94
10,900.0	60.96	8.07	10,698.6	7,150.9	-188.6	836.4	789,244.40	485,728.44	-102.51	7.94
11,000.0	68.57	5.54	10,741.2	7,193.5	-98.9	847.1	789,255.05	485,818.20	-12.14	7.94
11,100.0	76.20	3.27	10,771.4	7,223.7	-3.9	854.4	789,262.33	485,913.15	83.06	7.94
11,200.0	83.86	1.14	10,788.7	7,241.0	94.4	858.1	789,266.10	486,011.49	181.28	7.94
11,280.1	90.00	359.48	10,793.0	7,245.3	174.4	858.6	789,266.53	486,091.45	260.86	7.94
Start 7550.6 hold at 11280.1 MD										
11,300.0	90.00	359.48	10,793.0	7,245.3	194.3	858.4	789,266.35	486,111.33	280.62	0.00
11,400.0	90.00	359.48	10,793.0	7,245.3	294.3	857.5	789,265.45	486,211.33	380.01	0.00
11,500.0	90.00	359.48	10,793.0	7,245.3	394.3	856.6	789,264.54	486,311.32	479.39	0.00
11,600.0	90.00	359.48	10,793.0	7,245.3	494.2	855.7	789,263.64	486,411.32	578.78	0.00
11,700.0	90.00	359.48	10,793.0	7,245.3	594.2	854.8	789,262.74	486,511.31	678.16	0.00
11,800.0	90.00	359.48	10,793.0	7,245.3	694.2	853.9	789,261.84	486,611.31	777.55	0.00
11,900.0	90.00	359.48	10,793.0	7,245.3	794.2	853.0	789,260.93	486,711.31	876.93	0.00
12,000.0	90.00	359.48	10,793.0	7,245.3	894.2	852.1	789,260.03	486,811.30	976.32	0.00
12,100.0	90.00	359.48	10,793.0	7,245.3	994.2	851.2	789,259.13	486,911.30	1,075.70	0.00
12,200.0	90.00	359.48	10,793.0	7,245.3	1,094.2	850.3	789,258.22	487,011.29	1,175.09	0.00
12,300.0	90.00	359.48	10,793.0	7,245.3	1,194.2	849.4	789,257.32	487,111.29	1,274.47	0.00
12,400.0	90.00	359.48	10,793.0	7,245.3	1,294.2	848.4	789,256.42	487,211.29	1,373.86	0.00
12,500.0	90.00	359.48	10,793.0	7,245.3	1,394.2	847.5	789,255.51	487,311.28	1,473.24	0.00
12,600.0	90.00	359.48	10,793.0	7,245.3	1,494.2	846.6	789,254.61	487,411.28	1,572.62	0.00

Morcor Engineering
Morcor Standard Plan

Kaiser-Francis Oil Company

Company:	Kaiser Francis	Local Co-ordinate Reference:	Well Bell Lake Unit North 220H
Project:	Bell Lake Unit North 220H	TVD Reference:	WELL @ 3547.7usft (Original Well Elev)
Site:	Bell Lake Unit North 220H	MD Reference:	WELL @ 3547.7usft (Original Well Elev)
Well:	Bell Lake Unit North 220H	North Reference:	Grid
Wellbore:	Bell Lake Unit North 220H	Survey Calculation Method:	Minimum Curvature
Design:	191212 Bell Lake Unit North 220H	Database:	EDM 5000.1 Single User Db

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
12,700.0	90.00	359.48	10,793.0	7,245.3	1,594.2	845.7	789,253.71	487,511.27	1,672.01	0.00
12,800.0	90.00	359.48	10,793.0	7,245.3	1,694.2	844.8	789,252.81	487,611.27	1,771.39	0.00
12,900.0	90.00	359.48	10,793.0	7,245.3	1,794.2	843.9	789,251.90	487,711.27	1,870.78	0.00
13,000.0	90.00	359.48	10,793.0	7,245.3	1,894.2	843.0	789,251.00	487,811.26	1,970.16	0.00
13,100.0	90.00	359.48	10,793.0	7,245.3	1,994.2	842.1	789,250.10	487,911.26	2,069.55	0.00
13,200.0	90.00	359.48	10,793.0	7,245.3	2,094.2	841.2	789,249.19	488,011.25	2,168.93	0.00
13,300.0	90.00	359.48	10,793.0	7,245.3	2,194.2	840.3	789,248.29	488,111.25	2,268.32	0.00
13,400.0	90.00	359.48	10,793.0	7,245.3	2,294.2	839.4	789,247.39	488,211.25	2,367.70	0.00
13,500.0	90.00	359.48	10,793.0	7,245.3	2,394.2	838.5	789,246.49	488,311.24	2,467.09	0.00
13,600.0	90.00	359.48	10,793.0	7,245.3	2,494.2	837.6	789,245.58	488,411.24	2,566.47	0.00
13,700.0	90.00	359.48	10,793.0	7,245.3	2,594.2	836.7	789,244.68	488,511.23	2,665.86	0.00
13,800.0	90.00	359.48	10,793.0	7,245.3	2,694.2	835.8	789,243.78	488,611.23	2,765.24	0.00
13,900.0	90.00	359.48	10,793.0	7,245.3	2,794.2	834.9	789,242.87	488,711.23	2,864.63	0.00
14,000.0	90.00	359.48	10,793.0	7,245.3	2,894.2	834.0	789,241.97	488,811.22	2,964.01	0.00
14,100.0	90.00	359.48	10,793.0	7,245.3	2,994.1	833.1	789,241.07	488,911.22	3,063.39	0.00
14,200.0	90.00	359.48	10,793.0	7,245.3	3,094.1	832.2	789,240.16	489,011.21	3,162.78	0.00
14,300.0	90.00	359.48	10,793.0	7,245.3	3,194.1	831.3	789,239.26	489,111.21	3,262.16	0.00
14,400.0	90.00	359.48	10,793.0	7,245.3	3,294.1	830.4	789,238.36	489,211.20	3,361.55	0.00
14,500.0	90.00	359.48	10,793.0	7,245.3	3,394.1	829.5	789,237.46	489,311.20	3,460.93	0.00
14,600.0	90.00	359.48	10,793.0	7,245.3	3,494.1	828.6	789,236.55	489,411.20	3,560.32	0.00
14,700.0	90.00	359.48	10,793.0	7,245.3	3,594.1	827.7	789,235.65	489,511.19	3,659.70	0.00
14,800.0	90.00	359.48	10,793.0	7,245.3	3,694.1	826.8	789,234.75	489,611.19	3,759.09	0.00
14,900.0	90.00	359.48	10,793.0	7,245.3	3,794.1	825.9	789,233.84	489,711.18	3,858.47	0.00
15,000.0	90.00	359.48	10,793.0	7,245.3	3,894.1	825.0	789,232.94	489,811.18	3,957.86	0.00
15,100.0	90.00	359.48	10,793.0	7,245.3	3,994.1	824.1	789,232.04	489,911.18	4,057.24	0.00
15,200.0	90.00	359.48	10,793.0	7,245.3	4,094.1	823.2	789,231.13	490,011.17	4,156.63	0.00
15,300.0	90.00	359.48	10,793.0	7,245.3	4,194.1	822.3	789,230.23	490,111.17	4,256.01	0.00

Morcor Engineering
Morcor Standard Plan



Company:	Kaiser Francis	Local Co-ordinate Reference:	Well Bell Lake Unit North 220H
Project:	Bell Lake Unit North 220H	TVD Reference:	WELL @ 3547.7usft (Original Well Elev)
Site:	Bell Lake Unit North 220H	MD Reference:	WELL @ 3547.7usft (Original Well Elev)
Well:	Bell Lake Unit North 220H	North Reference:	Grid
Wellbore:	Bell Lake Unit North 220H	Survey Calculation Method:	Minimum Curvature
Design:	191212 Bell Lake Unit North 220H	Database:	EDM 5000.1 Single User Db

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
15,400.0	90.00	359.48	10,793.0	7,245.3	4,294.1	821.4	789,229.33	490,211.16	4,355.40	0.00
15,500.0	90.00	359.48	10,793.0	7,245.3	4,394.1	820.5	789,228.43	490,311.16	4,454.78	0.00
15,600.0	90.00	359.48	10,793.0	7,245.3	4,494.1	819.6	789,227.52	490,411.16	4,554.16	0.00
15,700.0	90.00	359.48	10,793.0	7,245.3	4,594.1	818.6	789,226.62	490,511.15	4,653.55	0.00
15,800.0	90.00	359.48	10,793.0	7,245.3	4,694.1	817.7	789,225.72	490,611.15	4,752.93	0.00
15,900.0	90.00	359.48	10,793.0	7,245.3	4,794.1	816.8	789,224.81	490,711.14	4,852.32	0.00
16,000.0	90.00	359.48	10,793.0	7,245.3	4,894.1	815.9	789,223.91	490,811.14	4,951.70	0.00
16,100.0	90.00	359.48	10,793.0	7,245.3	4,994.1	815.0	789,223.01	490,911.14	5,051.09	0.00
16,200.0	90.00	359.48	10,793.0	7,245.3	5,094.1	814.1	789,222.10	491,011.13	5,150.47	0.00
16,300.0	90.00	359.48	10,793.0	7,245.3	5,194.1	813.2	789,221.20	491,111.13	5,249.86	0.00
16,400.0	90.00	359.48	10,793.0	7,245.3	5,294.1	812.3	789,220.30	491,211.12	5,349.24	0.00
16,500.0	90.00	359.48	10,793.0	7,245.3	5,394.0	811.4	789,219.40	491,311.12	5,448.63	0.00
16,600.0	90.00	359.48	10,793.0	7,245.3	5,494.0	810.5	789,218.49	491,411.12	5,548.01	0.00
16,700.0	90.00	359.48	10,793.0	7,245.3	5,594.0	809.6	789,217.59	491,511.11	5,647.40	0.00
16,800.0	90.00	359.48	10,793.0	7,245.3	5,694.0	808.7	789,216.69	491,611.11	5,746.78	0.00
16,900.0	90.00	359.48	10,793.0	7,245.3	5,794.0	807.8	789,215.78	491,711.10	5,846.16	0.00
17,000.0	90.00	359.48	10,793.0	7,245.3	5,894.0	806.9	789,214.88	491,811.10	5,945.55	0.00
17,100.0	90.00	359.48	10,793.0	7,245.3	5,994.0	806.0	789,213.98	491,911.09	6,044.93	0.00
17,200.0	90.00	359.48	10,793.0	7,245.3	6,094.0	805.1	789,213.08	492,011.09	6,144.32	0.00
17,300.0	90.00	359.48	10,793.0	7,245.3	6,194.0	804.2	789,212.17	492,111.09	6,243.70	0.00
17,400.0	90.00	359.48	10,793.0	7,245.3	6,294.0	803.3	789,211.27	492,211.08	6,343.09	0.00
17,500.0	90.00	359.48	10,793.0	7,245.3	6,394.0	802.4	789,210.37	492,311.08	6,442.47	0.00
17,600.0	90.00	359.48	10,793.0	7,245.3	6,494.0	801.5	789,209.46	492,411.07	6,541.86	0.00
17,700.0	90.00	359.48	10,793.0	7,245.3	6,594.0	800.6	789,208.56	492,511.07	6,641.24	0.00
17,800.0	90.00	359.48	10,793.0	7,245.3	6,694.0	799.7	789,207.66	492,611.07	6,740.63	0.00
17,900.0	90.00	359.48	10,793.0	7,245.3	6,794.0	798.8	789,206.75	492,711.06	6,840.01	0.00
18,000.0	90.00	359.48	10,793.0	7,245.3	6,894.0	797.9	789,205.85	492,811.06	6,939.40	0.00

Morcor Engineering
Morcor Standard Plan



Company:	Kaiser Francis	Local Co-ordinate Reference:	Well Bell Lake Unit North 220H
Project:	Bell Lake Unit North 220H	TVD Reference:	WELL @ 3547.7usft (Original Well Elev)
Site:	Bell Lake Unit North 220H	MD Reference:	WELL @ 3547.7usft (Original Well Elev)
Well:	Bell Lake Unit North 220H	North Reference:	Grid
Wellbore:	Bell Lake Unit North 220H	Survey Calculation Method:	Minimum Curvature
Design:	191212 Bell Lake Unit North 220H	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
18,100.0	90.00	359.48	10,793.0	7,245.3	6,994.0	797.0	789,204.95	492,911.05	7,038.78	0.00	
18,200.0	90.00	359.48	10,793.0	7,245.3	7,094.0	796.1	789,204.05	493,011.05	7,138.17	0.00	
18,300.0	90.00	359.48	10,793.0	7,245.3	7,194.0	795.2	789,203.14	493,111.05	7,237.55	0.00	
18,400.0	90.00	359.48	10,793.0	7,245.3	7,294.0	794.3	789,202.24	493,211.04	7,336.93	0.00	
18,500.0	90.00	359.48	10,793.0	7,245.3	7,394.0	793.4	789,201.34	493,311.04	7,436.32	0.00	
18,600.0	90.00	359.48	10,793.0	7,245.3	7,494.0	792.5	789,200.43	493,411.03	7,535.70	0.00	
18,700.0	90.00	359.48	10,793.0	7,245.3	7,594.0	791.6	789,199.53	493,511.03	7,635.09	0.00	
18,800.0	90.00	359.48	10,793.0	7,245.3	7,694.0	790.7	789,198.63	493,611.03	7,734.47	0.00	
18,830.7	90.00	359.48	10,793.0	7,245.3	7,724.7	790.4	789,198.35	493,641.72	7,764.98	0.00	
TD at 18830.7 - 5 1/2" Production Casing											

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,350.0	1,350.0	13 3/8" Surface Casing	13-3/8	17-1/2	
5,216.9	5,200.0	9 5/8" Intermediate Casing	9-5/8	12-1/4	
120.0	120.0	20" Conductor	20	26	
18,830.7	10,793.0	5 1/2" Production Casing	5-1/2	8-3/4	

Morcor Engineering
Morcor Standard Plan



Company:	Kaiser Francis	Local Co-ordinate Reference:	Well Bell Lake Unit North 220H
Project:	Bell Lake Unit North 220H	TVD Reference:	WELL @ 3547.7usft (Original Well Elev)
Site:	Bell Lake Unit North 220H	MD Reference:	WELL @ 3547.7usft (Original Well Elev)
Well:	Bell Lake Unit North 220H	North Reference:	Grid
Wellbore:	Bell Lake Unit North 220H	Survey Calculation Method:	Minimum Curvature
Design:	191212 Bell Lake Unit North 220H	Database:	EDM 5000.1 Single User Db

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
8,682.9	8,647.0	Bone Spring		0.00		
4,987.6	4,972.0	Base of Salt		0.00		
5,239.0	5,222.0	Lamar		0.00		
1,645.0	1,645.0	Salado		0.00		
6,747.3	6,722.0	Bell Canyon		0.00		
8,457.6	8,423.0	Brushy Canyon		0.00		
10,622.3	10,523.0	2nd BS Sand		0.00		
5,540.7	5,522.0	Cherry Canyon		0.00		
1,972.0	1,972.0	Top of Salt		0.00		
1,248.0	1,248.0	Ruslter		0.00		
9,047.9	9,010.0	Avalon		0.00		
10,044.5	9,998.0	1st BS Sand		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
2,000.0	2,000.0	0.0	0.0	Start Build 3.00	
2,200.0	2,199.6	-6.7	8.0	Start 7700.0 hold at 2200.0 MD	
9,900.0	9,857.5	-524.1	624.6	Start DLS 10.00 TFO -9.50	
10,020.6	9,975.2	-538.5	645.0	Start DLS 7.94 TFO -122.79	
11,280.1	10,793.0	174.4	858.6	Start 7550.6 hold at 11280.1 MD	
18,830.7	10,793.0	7,724.7	790.4	TD at 18830.7	

Checked By: _____ Approved By: _____ Date: _____



APD ID: 10400053279

Submission Date: 01/20/2020

Highlighted data
reflects the most
recent changes

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

BLUN_220H_Existing_Roads_20200115104059.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

BLUN_220H_1_Mile_Map_20200115104153.pdf

BLUN_220H_1_Mile_Data_20200115104517.pdf

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

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

Submit or defer a Proposed Production Facilities plan? DEFER

Estimated Production Facilities description: Production facilities are planned for the south side of pad. Plan for initial wells: 2-1000 bbl water tanks and 5 -1000 bbl oil tanks, a temporary 6X20 horizontal 3-phase sep, a 48 X 10 3-phase sep, a 8 X 20 heater treater and a 48X 10 2-phase sep

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: OTHER

Describe type: Brine Water

Water source use type: INTERMEDIATE/PRODUCTION
CASING

Source latitude:

Source longitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Water source transport method: TRUCKING

Source land ownership: PRIVATE

Source transportation land ownership: STATE

Water source volume (barrels): 20000

Source volume (acre-feet): 2.57786193

Source volume (gal): 840000

Water source type: OTHER

Describe type: FRESH WATER

Water source use type: STIMULATION
OTHER
SURFACE CASING

Describe use type: ROAD/PAD CONSTRUCTION AND

Source latitude:

Source longitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

Water source transport method: TRUCKING

Source land ownership: PRIVATE

Source transportation land ownership: OTHER

Water source volume (barrels): 250000

Source volume (gal): 10500000

Describe transportation land ownership: Source transportation land ownership is a mixture of Federal, State and County.

Source volume (acre-feet): 32.223274

Water source and transportation map:

BLUN_Pad_1_Wtr_Source_Map_20200114115948.pdf

Water source comments: Source transportation land ownership is a mixture of Federal, State and County.

New water well? N

New Water Well Info

Well latitude:

Well Longitude:

Well datum:

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

Aquifer comments:

Aquifer documentation:

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

Drilling method:

Drill material:

Grout material:

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

Well Production type:

Completion Method:

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: On site caliche will be used for construction if sufficient. In the event insufficient quantities of caliche are available onsite, caliche will be trucked in from BLM's caliche pit in SWSW Section 22-T24-R34E or NENE Section 20-T23S-R33E.

Construction Materials source location attachment:

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

Section 7 - Methods for Handling Waste

Waste type: GARBAGE

Waste content description: Miscellaneous trash

Amount of waste: 500 pounds

Waste disposal frequency : One Time Only

Safe containment description: Trash produced during drilling and completion operations will be collected in a trash container and disposed of properly

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: Trucked to an approved disposal facility (Sandpoint Landfill (solid materials dump) NW/4 Section 11-T21S-R28E)

Waste type: SEWAGE

Waste content description: Human waste and grey water

Amount of waste: 1000 gallons

Waste disposal frequency : One Time Only

Safe containment description: Waste material will be stored safely and disposed of properly

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: Trucked to an approved disposal facility (Carlsbad sewer plant SENW Section 10-T22S-R27E)

Waste type: DRILLING

Waste content description: Drilling fluids and cuttings

Amount of waste: 3900 barrels

Waste disposal frequency : One Time Only

Safe containment description: All drilling fluids will be stored safely and disposed of properly

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: Cuttings will be hauled to R360's facility located in Section 27-T20S-R32E on US 62/180 at Halfway, NM

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.)

Reserve pit width (ft.)

Reserve pit depth (ft.)

Reserve pit volume (cu. yd.)

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

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? Y

Description of cuttings location Cuttings will be stored in roll off bins and hauled to R360 located in Section 27-T20S-R32E on US 62/180 near Halfway.

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

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

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

BLUN_220H_Wellsite_Layout_20200120160252.pdf

BLUN_220H_Rig_Layout_20200806183314.pdf

Comments:

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: NORTH BELL LAKE UNIT

Multiple Well Pad Number: 1

Recontouring attachment:

BLUN_220H_IR_Plat_20200115105054.pdf

Drainage/Erosion control construction: During construction proper erosion control methods will be used to control erosion, runoff and siltation of the surrounding area.

Drainage/Erosion control reclamation: Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.

Well pad proposed disturbance (acres): 6.71	Well pad interim reclamation (acres): 1.03	Well pad long term disturbance (acres): 5.68
Road proposed disturbance (acres): 0.097	Road interim reclamation (acres): 0	Road long term disturbance (acres): 0.097
Powerline proposed disturbance (acres): 0	Powerline interim reclamation (acres): 0	Powerline long term disturbance (acres): 0
Pipeline proposed disturbance (acres): 0	Pipeline interim reclamation (acres): 0	Pipeline long term disturbance (acres): 0
Other proposed disturbance (acres): 0	Other interim reclamation (acres): 0	Other long term disturbance (acres): 0
Total proposed disturbance: 6.807	Total interim reclamation: 1.03	Total long term disturbance: 5.777

Disturbance Comments:

Reconstruction method: The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

Topsoil redistribution: Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations

Soil treatment: To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. 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.

Existing Vegetation at the well pad: The historic climax plant community is a grassland dominated by black grama, dropseeds, and blue stems with sand sage and shinnery oak distributed evenly throughout. Current landscape displays mesquite, shinnery oak, yucca, desert sage, fourwing saltbush, snakeweed, and bunch grasses

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Refer to "Existing Vegetation at the well pad"

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Refer to "Existing Vegetation at the well pad"

Existing Vegetation Community at the pipeline attachment:

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

Existing Vegetation Community at other disturbances: None

Existing Vegetation Community at other disturbances attachment:

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre
-----------	-------------

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name:

Last Name:

Phone:

Email:

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: No invasive species present. Standard regular maintenance to maintain a clear location and road.

Weed treatment plan attachment:

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

Monitoring plan description: Identify areas supporting weeds prior to construction; prevent the introduction and spread of weeds from construction equipment during construction; and contain weed seeds and propagules by preventing segregated topsoil from being spread to adjacent areas. No invasive species present. Standard regular maintenance to maintain a clear location and road.

Monitoring plan attachment:

Success standards: To maintain all disturbed areas as per Gold Book standards

Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: NM STATE LAND OFFICE, 602 N CANAL ST B, CARLSBAD, NM 88220

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Section 12 - Other Information

Right of Way needed? N

Use APD as ROW?

ROW Type(s):

ROW Applications

Operator Name: KAISER FRANCIS OIL COMPANY

Well Name: BELL LAKE UNIT NORTH

Well Number: 220H

SUPO Additional Information: APD's for the Bell Lake Unit North 119H and 211H on this pad (BLUN Pad 1) are APPROVED.

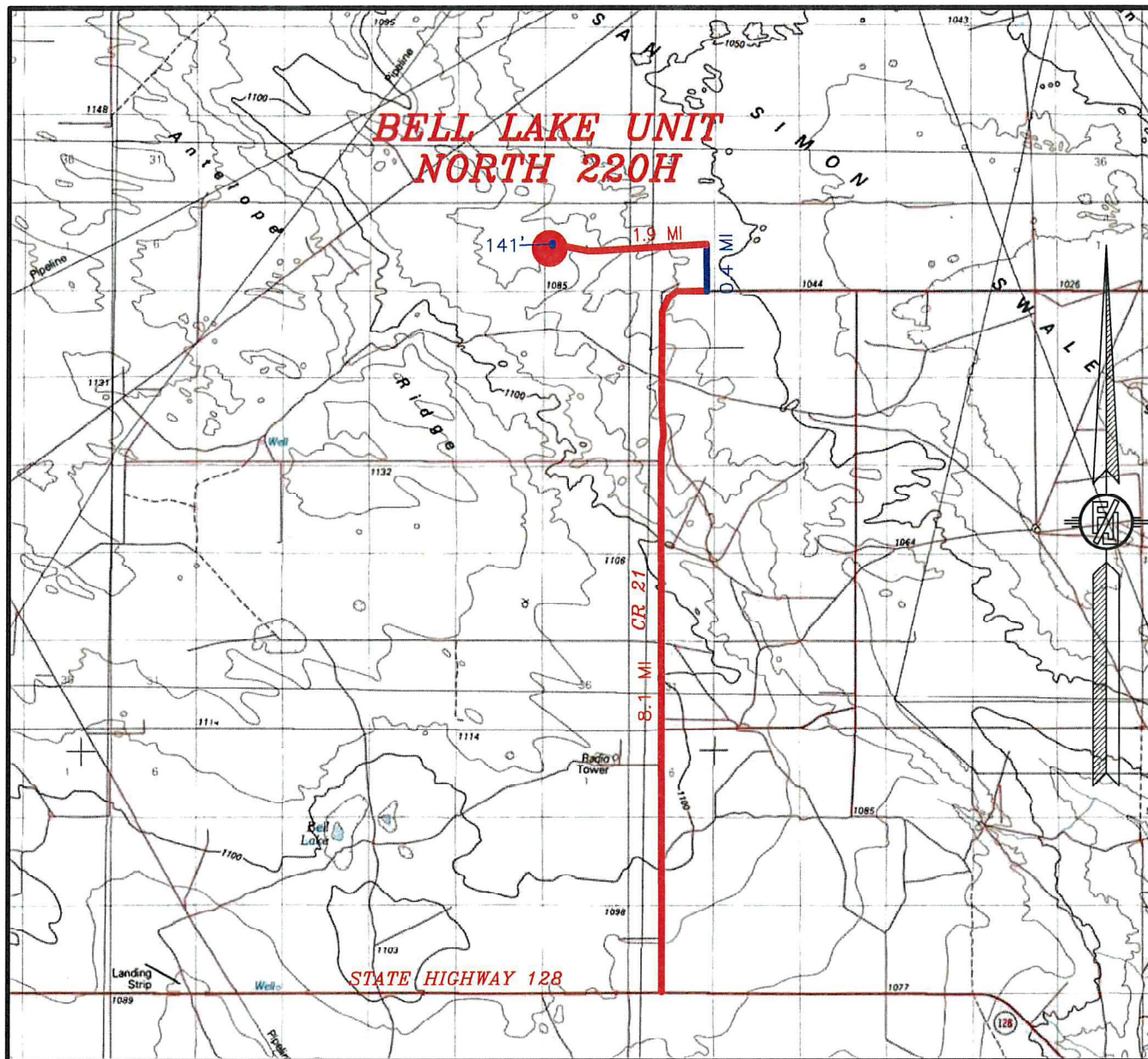
Use a previously conducted onsite? Y

Previous Onsite information: Onsite conducted 07/20/2017 by Fernando Banos (BLM), Matt Warner & Melanie Wilson (Kaiser-Francis), Jimmy Harrison (John West Surveying) and Jeff (APAC archaeologist).

Other SUPO Attachment

BELL_LAKE_UNIT_NORTH_Pad_1_SUPO_20200806183413.pdf

SECTION 1, TOWNSHIP 23 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

KAISER-FRANCIS OIL CO.
BELL LAKE UNIT NORTH 220H
LOCATED 2508 FT. FROM THE SOUTH LINE
AND 380 FT. FROM THE WEST LINE OF
SECTION 1, TOWNSHIP 23 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

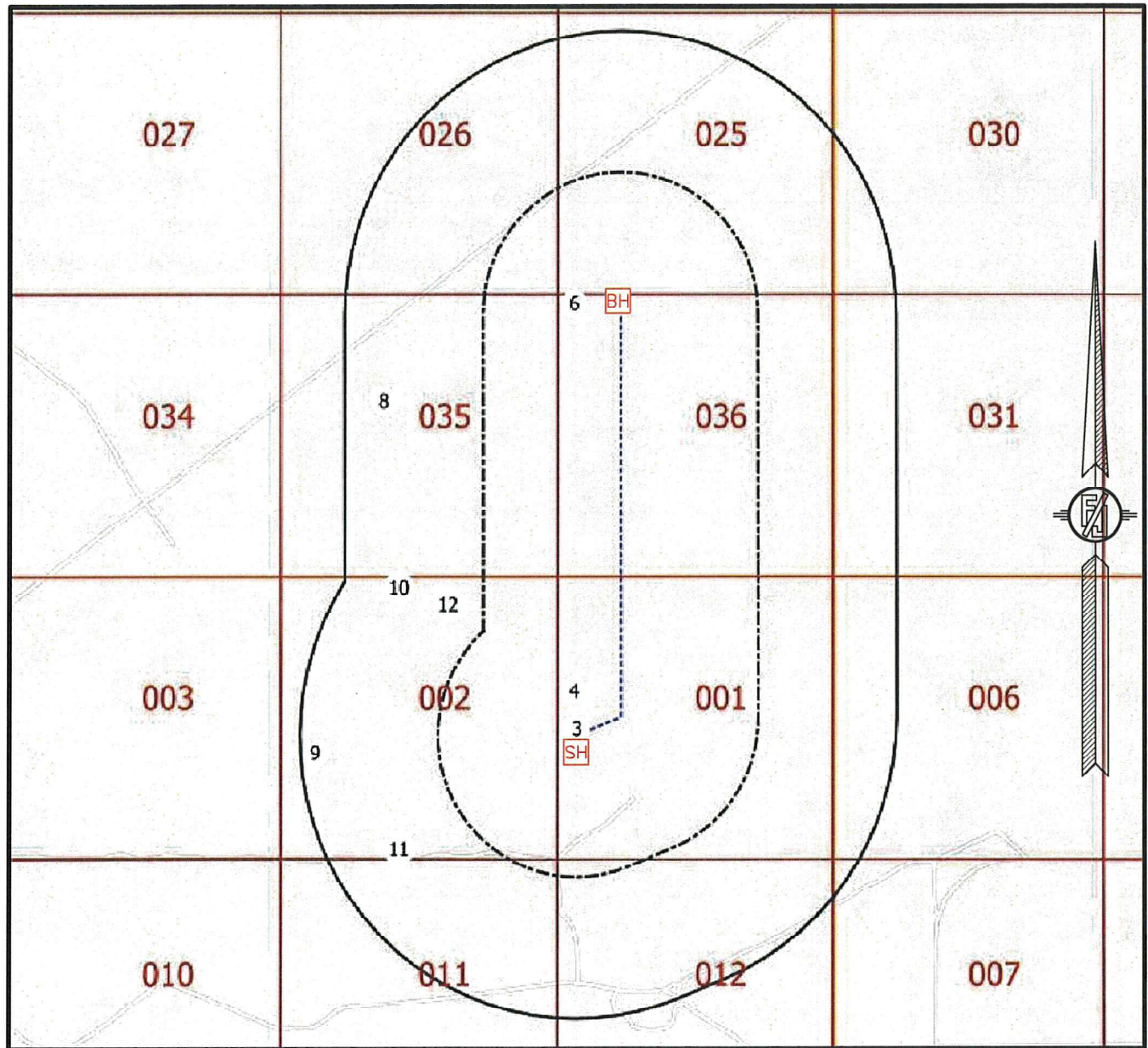
DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HIGHWAY 128 & CR 21
(DELAWARE BASIN ROAD) GO NORTH ON CR 21 8.1 MILES WHERE
ROAD TURNS RIGHT (EAST) AT THE END OF CURVE AT THE 2ND
LEASE ROAD (KAISER FRANCIS SIGNS) ON LEFT SIDE OF ROAD
(NORTH), TURN NORTH AT 2ND LEASE ROAD GO APPROX. 0.4 OF A
MILE, ROAD TURNS LEFT (WEST) GO WEST APPROX. 1.9 MILES TO A
ROAD LATH RED & WHITE FLAGGING ON LEFT (SOUTH) SIDE OF LEASE
ROAD GO SOUTH 141' TO NORTH EDGE OF PAD FOR THIS LOCATION.

MARCH 26, 2019

MADRON SURVEYING, INC. 301 SOUTH CANAL SURVEY NO. 7069
(575) 234-3341 CARLSBAD, NEW MEXICO

1-MILE MAP



NOT TO SCALE

WELL DATA FROM NMOCD GIS - 4/1/19

SH SURFACE LOCATION

BH BOTTOM OF HOLE

XX WELLS WITHIN 1 MILE

--- WELL PATH

--- 1/4 MILE BOUNDARY

— 1-MILE BOUNDARY

KAISER-FRANCIS OIL CO.
BELL LAKE UNIT NORTH 220H
 LOCATED 2508 FT. FROM THE SOUTH LINE
 AND 380 FT. FROM THE WEST LINE OF
 SECTION 1, TOWNSHIP 23 SOUTH,
 RANGE 33 EAST, N.M.P.M.
 LEA COUNTY, STATE OF NEW MEXICO

MARCH 26, 2019

SURVEY NO. 7069

MADRON SURVEYING, INC. 301 SOUTH CANAL
 (575) 234-3341

CARLSBAD, NEW MEXICO

Kaiser-Francis Oil Company
Bell Lake Unit North 220H
One Mile Radius Map

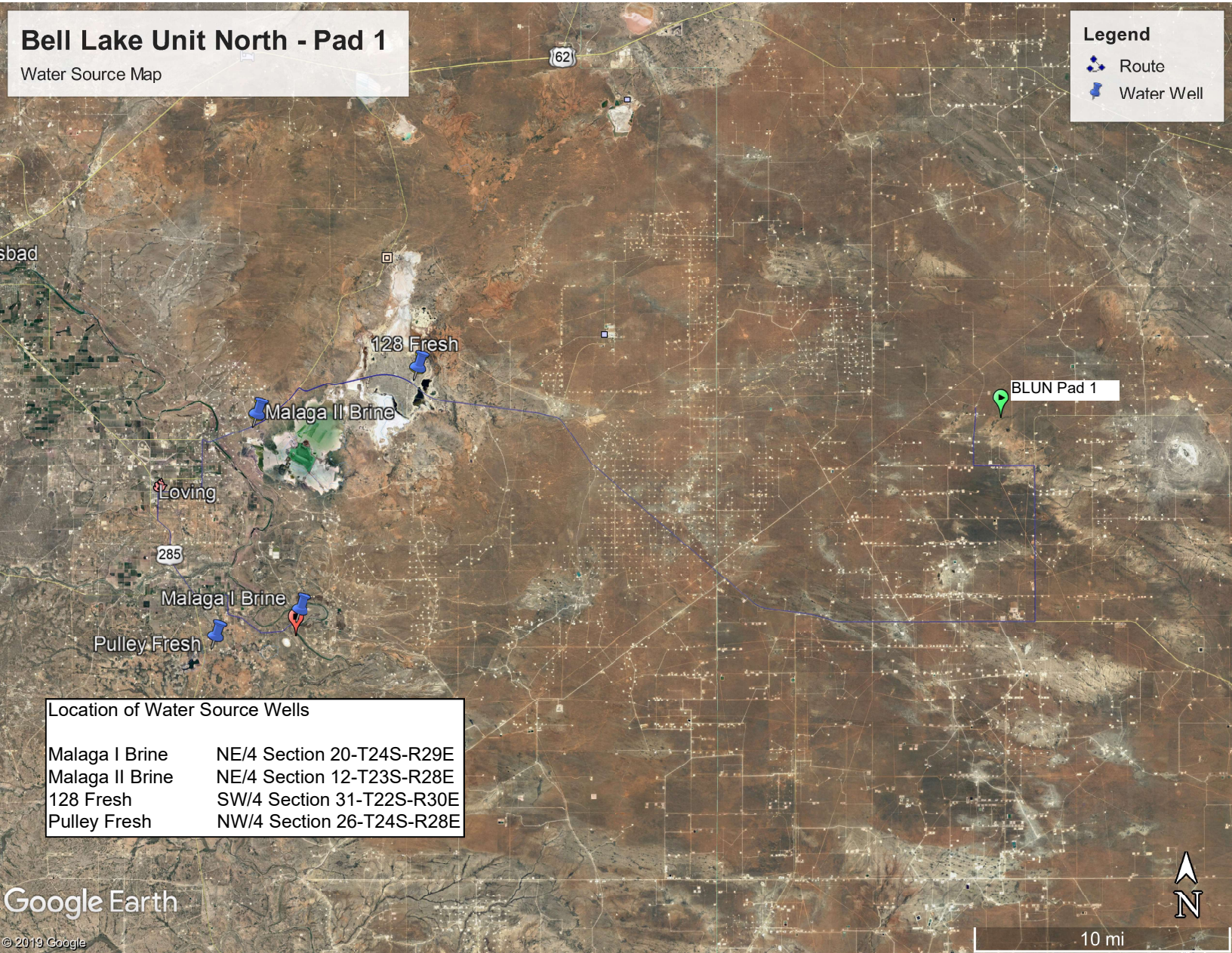
ID	API	wellname	well type	ulstr	ogrid	status	status dir	elevation	MD	TVD	latitude	longitude	Pool ID
3	30-025-45510	BELL LAKE UNIT NORTH #211H	O	L-01-23S-33E	12361	N	H	3528	0	0	32.333267	-103.533385	[98259]
3	30-025-45509	BELL LAKE UNIT NORTH #119H	O	L-01-23S-33E	12361	N	H	3528	0	0	32.333185	-103.533385	[98259]
4	30-025-45153	BELL LAKE UNIT NORTH #202H	O	E-01-23S-33E	12361	N	H	3516	0	0	32.3353289	-103.5335599	[98259]
4	30-025-44691	BELL LAKE UNIT NORTH #301H	O	E-01-23S-33E	12361	N	H	3518	0	0	32.335109	-103.533561	[5150] B
4	30-025-45079	BELL LAKE UNIT NORTH #101H	O	E-01-23S-33E	12361	N	H	3516	0	0	32.3352464	-103.5335601	[98259]
4	30-025-44693	BELL LAKE UNIT NORTH #401H	O	E-01-23S-33E	12361	N	H	3518	0	0	32.335164	-103.53356	[5150] B
6	30-025-44690	BELL LAKE UNIT NORTH #201H	O	E-01-23S-33E	12361	N	H	3517	0	0	32.355054	-103.533561	[5150] B
8	30-025-26902	PRE-ONGARD WELL #001	O	F-35-22S-33E	214263	P	0	0	0	15700	32.3500481	-103.5453186	
9	30-025-26492	STATE HL #001	O	L-02-23S-33E	217955	P	V	3596	15640	15640	32.3319473	-103.5495605	[7320] B
10	30-025-42811	SOPAPILLA STATE #003H	O	3-02-23S-33E	217955	N	H	3460	0	0	32.34043665	-103.544385	[7320] B
11	30-025-40858	SOPAPILLA STATE #002H	O	N-02-23S-33E	217955	A	H	3549	15532	10930	32.3270111	-103.5443649	[7320] B
12	30-025-42831	NORTH THISTLE 2 35 FEDERAL #001H	O	2-02-23S-33E	6137	A	H	3515	16285	10959	32.3395618	-103.5413391	[7320] B
12	30-025-42821	NORTH THISTLE 2 STATE #002H	O	2-02-23S-33E	6137	A	H	3515	16285	10998	32.3395611	-103.5410153	[7320] B
12	30-025-42533	NORTH THISTLE 2 STATE #001H	O	2-02-23S-33E	6137	A	H	3514	13879	9576	32.3395612	-103.5411774	[7320] B

Bell Lake Unit North - Pad 1

Water Source Map

Legend

- Route
- Water Well



Google Earth

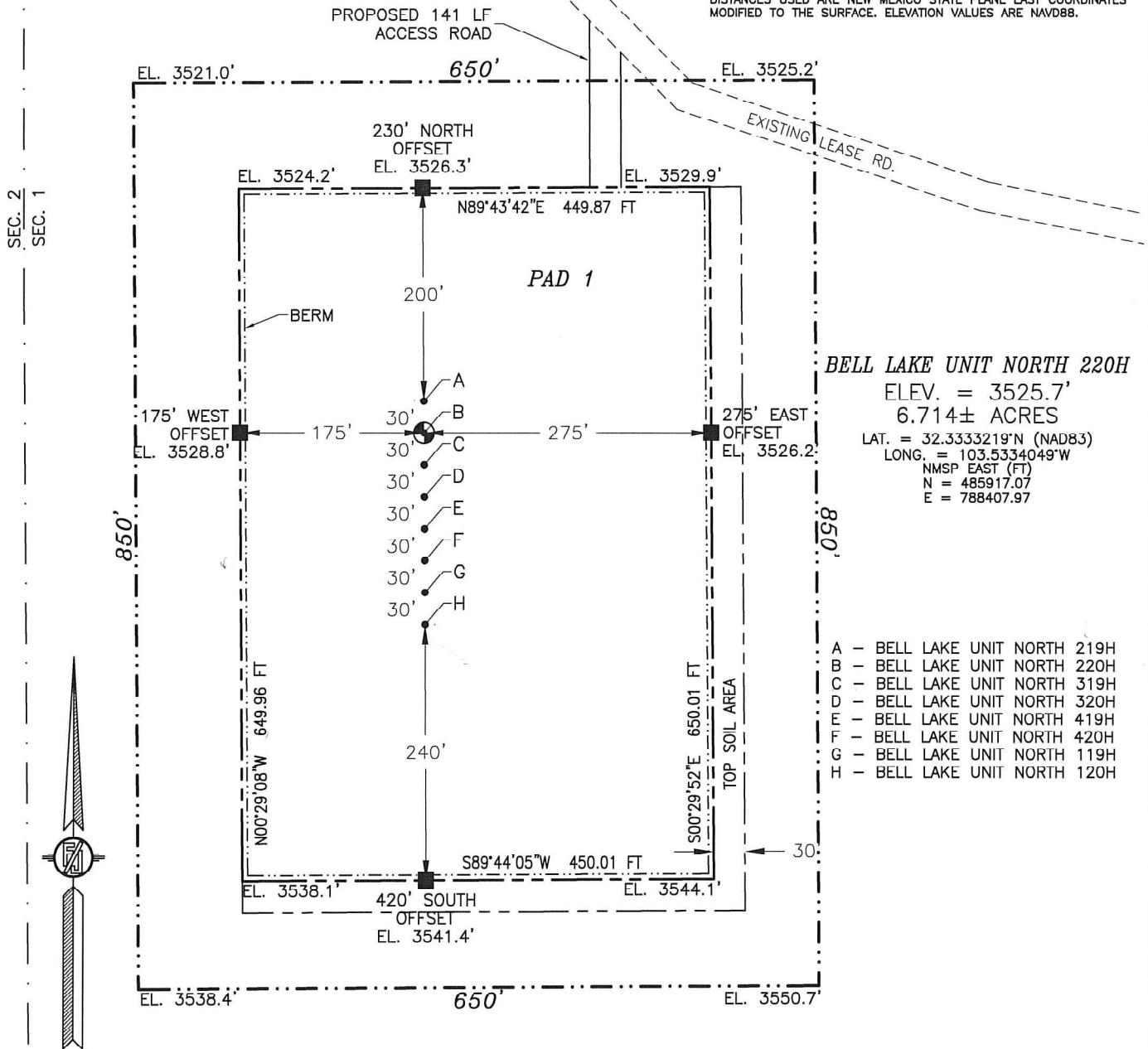
© 2019 Google

10 mi

SECTION 1, TOWNSHIP 23 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

SITE MAP

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83) LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. ELEVATION VALUES ARE NAVD88.



015 75 150 300
SCALE 1" = 150'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HIGHWAY 128 & CR 21 (DELAWARE BASIN ROAD) GO NORTH ON CR 21 8.1 MILES WHERE ROAD TURNS RIGHT (EAST) AT THE END OF CURVE AT THE 2ND LEASE ROAD (KAISER FRANCIS SIGNS) ON LEFT SIDE OF ROAD (NORTH), TURN NORTH AT 2ND LEASE ROAD GO APPROX. 0.4 OF A MILE, ROAD TURNS LEFT (WEST) GO WEST APPROX. 1.9 MILES TO A ROAD LATH RED & WHITE FLAGGING ON LEFT (SOUTH) SIDE OF LEASE ROAD GO SOUTH 141' TO NORTH EDGE OF PAD FOR THIS LOCATION.

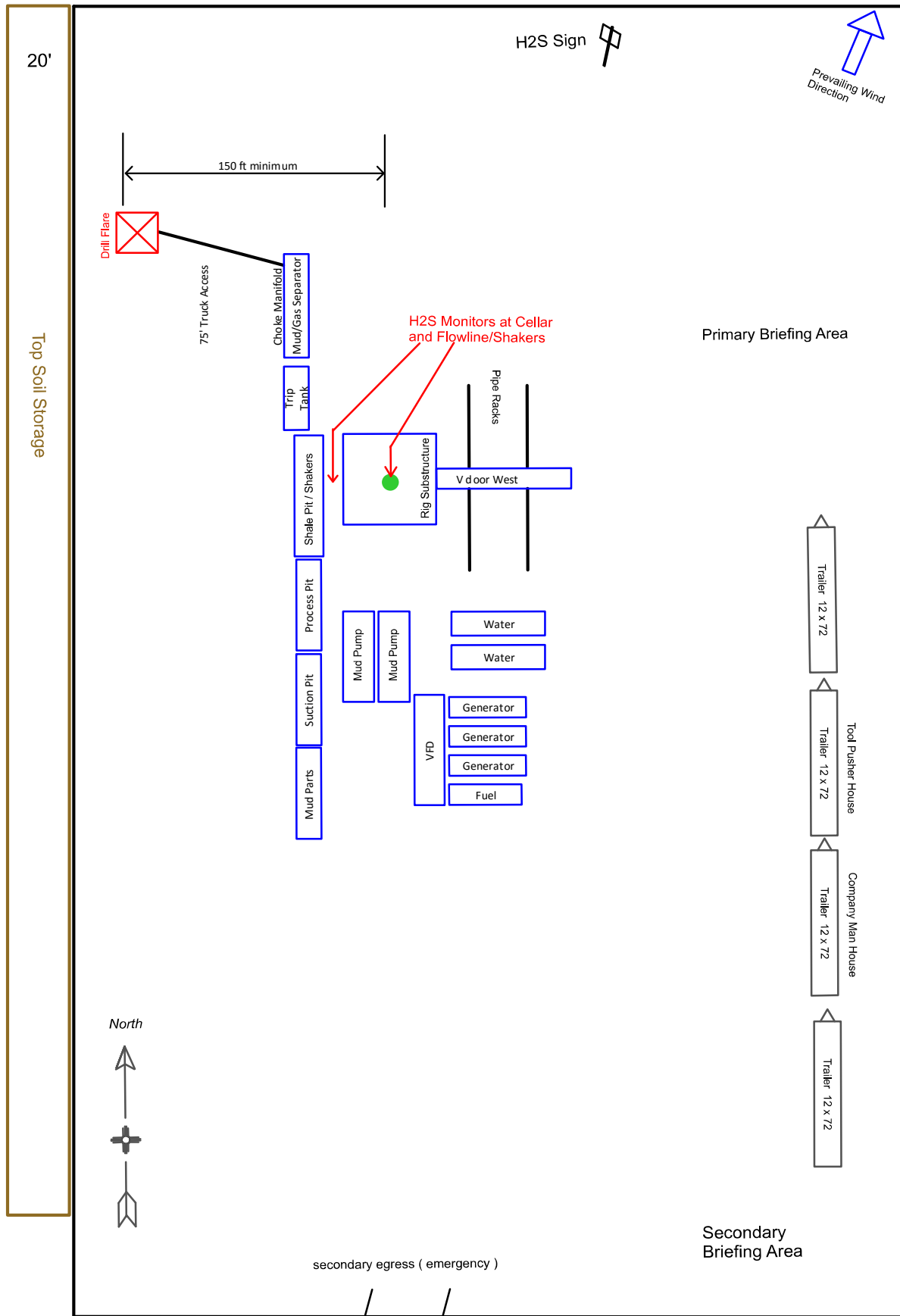
KAISER-FRANCIS OIL CO.
BELL LAKE UNIT NORTH 220H
LOCATED 2508 FT. FROM THE SOUTH LINE
AND 380 FT. FROM THE WEST LINE OF
SECTION 1, TOWNSHIP 23 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

MARCH 26, 2019

SURVEY NO. 7069

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341

CARLSBAD, NEW MEXICO



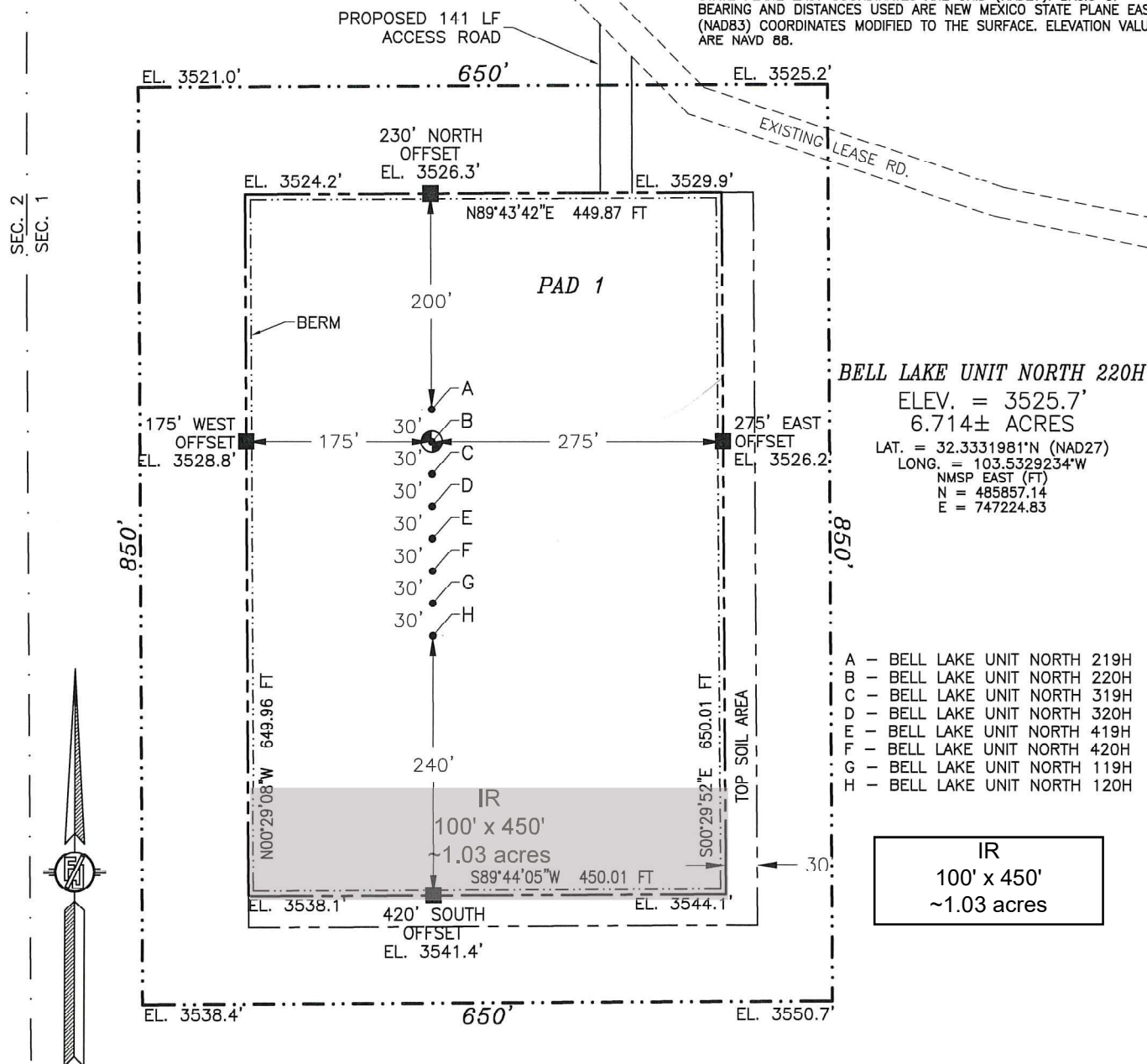
Drill Site Layout
Bell Lake Unit North #220H

450' x 650'

SECTION 1, TOWNSHIP 23 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

SITE MAP

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1927 (NAD27). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD27). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST (NAD83) COORDINATES MODIFIED TO THE SURFACE. ELEVATION VALUES ARE NAVD 88.



015 75 150 300
SCALE 1" = 150'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HIGHWAY 128 & CR 21 (DELAWARE BASIN ROAD) GO NORTH ON CR 21 8.1 MILES WHERE ROAD TURNS RIGHT (EAST) AT THE END OF CURVE AT THE 2ND LEASE ROAD (KAISER FRANCIS SIGNS) ON LEFT SIDE OF ROAD (NORTH), TURN NORTH AT 2ND LEASE ROAD GO APPROX. 0.4 OF A MILE, ROAD TURNS LEFT (WEST) GO WEST APPROX. 1.9 MILES TO A ROAD LATH RED & WHITE FLAGGING ON LEFT (SOUTH) SIDE OF LEASE ROAD GO SOUTH 141' TO NORTH EDGE OF PAD FOR THIS LOCATION.

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BELL LAKE UNIT NORTH 220H
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LEA COUNTY, STATE OF NEW MEXICO

MARCH 26, 2019

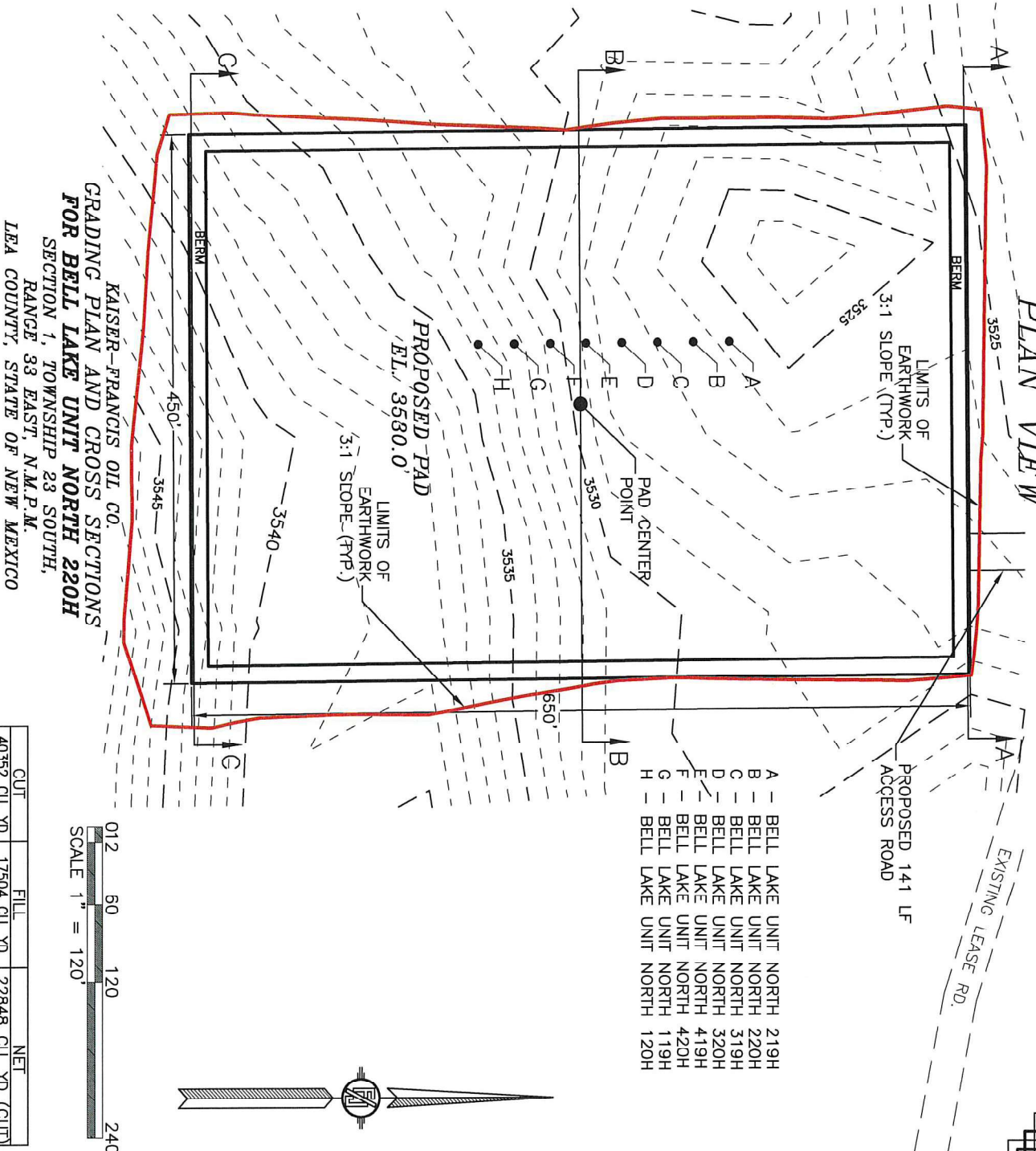
SURVEY NO. 7069

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341

CARLSBAD, NEW MEXICO

SEC. 2
SEC. 1

PLAN VIEW



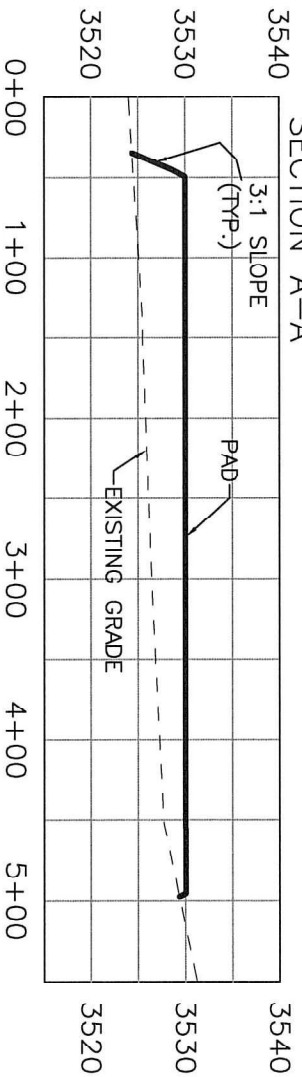
MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

MARCH 26, 2019

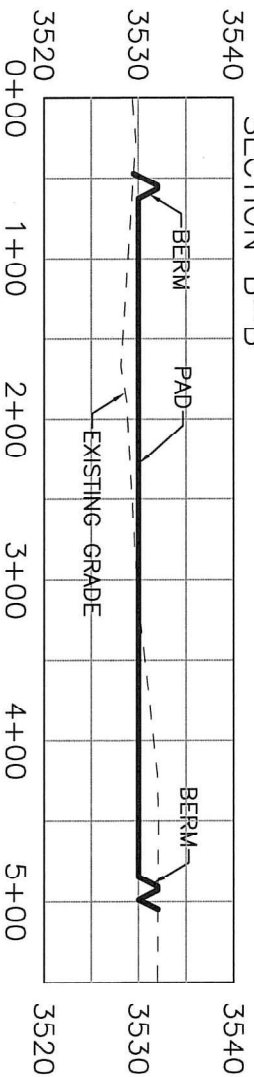
SHEET 1-2
SURVEY NO. 7069

CROSS SECTIONS

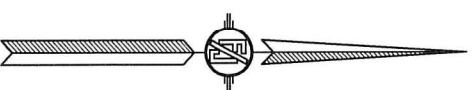
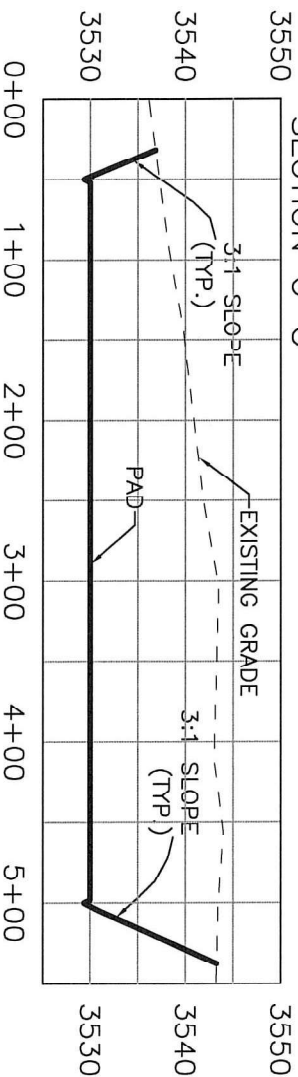
SECTION A-A



SECTION B-B



SECTION C-C



KAISER-FRANCIS OIL CO.
GRADING PLAN AND CROSS SECTIONS
FOR BELL LAKE UNIT NORTH 220H
SECTION 1, TOWNSHIP 23 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

MARCH 26, 2019

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

CUT	FILL	NET
40352 CU. YD	17504 CU. YD	22848 CU. YD (CUT)

012 60 120 240
SCALE 1" = 120' - 1" = 20' VER

EARTHWORK QUANTITIES ARE ESTIMATED

SHEET 2-2
SURVEY NO. 7069

District I
1625 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 Road, 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, NM 87505

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

OCD - HOBBS
09/14/2020
RECEIVED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-47766		² Pool Code 98259	³ Pool Name Ojo Chiso; Bone Spring, Southwest
⁴ Property Code 316707	⁵ Property Name BELL LAKE UNIT NORTH		⁶ Well Number 220H
⁷ GRID No. 12361	⁸ Operator Name KAISER-FRANCIS OIL CO.		⁹ Elevation 3525.7

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	1	23 S	33 E		2508	SOUTH	380	WEST	LEA

¹¹ 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
D	36	22 S	33 E		330	NORTH	1230	WEST	LEA

¹² Dedicated Acres 480	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-14527A
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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.

<p>NW CORNER SEC. 36 LAT. = 32.3554518°N LONG. = 103.5346457°W NMSP EAST (FT) N = 493965.14 E = 787964.68</p> <p>W/4 CORNER SEC. 36 LAT. = 32.3481909°N LONG. = 103.5346090°W NMSP EAST (FT) N = 491323.69 E = 787995.70</p> <p>NW CORNER SEC. 1 LAT. = 32.3409374°N LONG. = 103.5346038°W NMSP EAST (FT) N = 488684.86 E = 788017.01</p> <p>W/4 CORNER SEC. 1 LAT. = 32.3336804°N LONG. = 103.5346354°W NMSP EAST (FT) N = 486044.89 E = 788026.92</p> <p>SW CORNER SEC. 1 LAT. = 32.3264324°N LONG. = 103.5346254°W NMSP EAST (FT) N = 483407.85 E = 788049.66</p>		<p>N89°42'02"E 2649.25 FT N89°43'36"E 2640.45 FT</p> <p>N/4 CORNER SEC. 36 LAT. = 32.3554352°N LONG. = 103.5260684°W NMSP EAST (FT) N = 493978.97 E = 790613.37</p> <p>N00°31'03"W 7551.92 FT</p> <p>NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83) LISTED NEW MEXICO STATE PLANE. EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE. EAST COORDINATES MODIFIED TO THE SURFACE. VERTICAL DATUM NAVD83.</p> <p>N89°43'01"E 2641.32 FT N89°42'43"E 2641.83 FT</p> <p>N/4 CORNER SEC. 1 LAT. = 32.3409188°N LONG. = 103.5260536°W NMSP EAST (FT) N = 488697.91 E = 790657.78</p> <p>N80°27'01"E 871.05 FT</p> <p>BELL LAKE UNIT NORTH 220H ELEV. = 3525.7' LAT. = 32.3333219°N (NAD83) LONG. = 103.5334049°W NMSP EAST (FT) N = 485917.07 E = 788407.97</p> <p>S/4 CORNER SEC. 1 LAT. = 32.3264117°N LONG. = 103.5260688°W NMSP EAST (FT) N = 483420.12 E = 790692.86</p> <p>S89°44'02"W 2643.75 FT S89°44'23"W 2645.14 FT</p>	<p>NE CORNER SEC. 36 LAT. = 32.3554148°N LONG. = 103.5175197°W NMSP EAST (FT) N = 493991.56 E = 793253.27</p> <p>E/4 CORNER SEC. 36 LAT. = 32.3481596°N LONG. = 103.5175056°W NMSP EAST (FT) N = 491352.12 E = 793277.73</p> <p>NE CORNER SEC. 1 LAT. = 32.3409003°N LONG. = 103.5175017°W NMSP EAST (FT) N = 488711.19 E = 793299.05</p> <p>E/4 CORNER SEC. 1 LAT. = 32.3336453°N LONG. = 103.5175054°W NMSP EAST (FT) N = 486071.77 E = 793318.03</p> <p>SE CORNER SEC. 1 LAT. = 32.3263896°N LONG. = 103.5175076°W NMSP EAST (FT) N = 483432.13 E = 793337.44</p>	<p>17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Melanie Wilson</i> 01/15/2020 Signature Date</p> <p>Melanie Wilson Printed Name</p> <p>mjp1692@gmail.com E-mail Address</p> <p>18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>MARCH 26, 2019 Date of Survey</p> <p><i>PILMON F. JARAMILLO</i> Signature and Seal of Professional Surveyor</p> <p>Certificate Number: PILMON F. JARAMILLO, PLS 12797 SURVEY NO. 7069</p>
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District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Original
to Appropriate
District Office

OCD - HOBBS
09/14/2020
RECEIVED

GAS CAPTURE PLAN

Date: **01/26/2018**

☒ Original

Operator & OGRID No.: Kaiser-Francis Oil Company, 12361

☐ Amended - Reason for Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Bell Lake Unit North 219H		1-23S-33E		2000	0	
Bell Lake Unit North 220H	30-025-47766	1-23S-33E	2508' FSL/380' FWL	2000	0	
Bell Lake Unit North 319H		1-23S-33E		2000	0	
Bell Lake Unit North 320H		1-23S-33E		2000	0	
Bell Lake Unit North 419H		1-23S-33E	2418' FSL/380' FWL	2000	0	
Bell Lake Unit North 420H		1-23S-33E	2388' FSL/380' FWL	2000	0	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Targa and will be connected to Targa low/high pressure gathering system located in Lea County, New Mexico. It will require 11,000' of pipeline to connect the facility to low/high pressure gathering system. Kaiser-Francis Oil Company provides (periodically) to Targa a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Kaiser-Francis Oil Company and Targa have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Targa Processing Plant located in Sec. 36, Twn. 19S, Rng. 36E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Targa system at that time. Based on current information, it is Kaiser-Francis Oil Company's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines