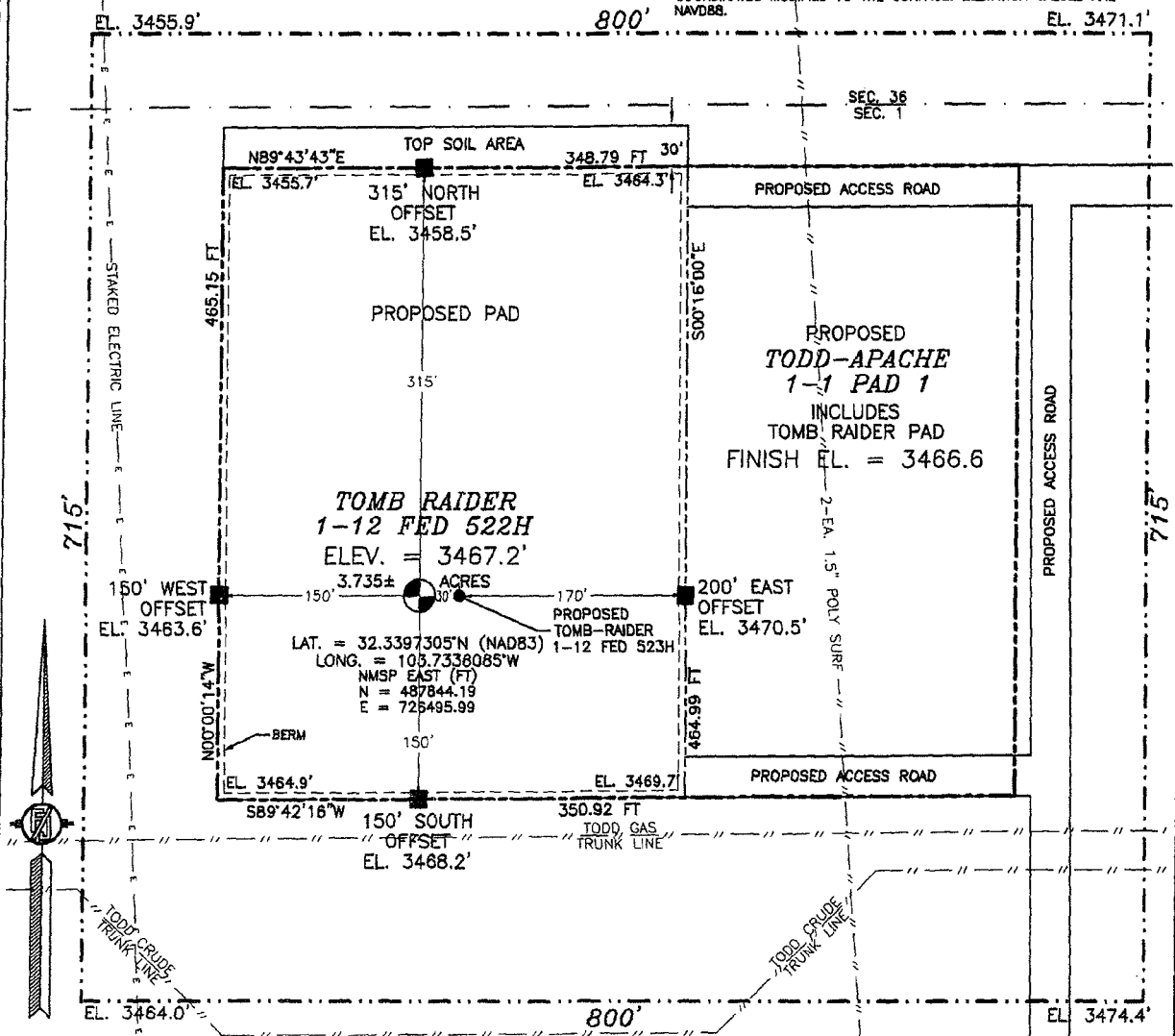


SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

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.



012	60	120	240
-----	----	-----	-----

SCALE 1" = 120'

DIRECTIONS TO LOCATION

FROM STATE HIGHWAY 128 AND CR 798 (RED ROAD) GO NORTH ON CR 798 6.4 MILES. TURN RIGHT ON CALICHE ROAD AND GO EAST 0.4 OF A MILE, BEND RIGHT AND GO SOUTH 0.15 OF A MILE, BEND LEFT AND GO SOUTHEAST 0.19 OF A MILE, TURN RIGHT AND GO SOUTH 0.11 OF A MILE TO A PROPOSED ROAD SURVEY WHERE ROAD BENDS LEFT. FOLLOW FLAGS SOUTH 90°, THEN WEST 378° TO THE NORTHEAST PAD CORNER FOR THIS LOCATION.

DEVON ENERGY PRODUCTION COMPANY, L.P.
TOMB RAIDER 1-12 FED 522H

LOCATED 360 FT. FROM THE NORTH LINE
AND 1929 FT. FROM THE WEST LINE OF
SECTION 1, TOWNSHIP 23 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

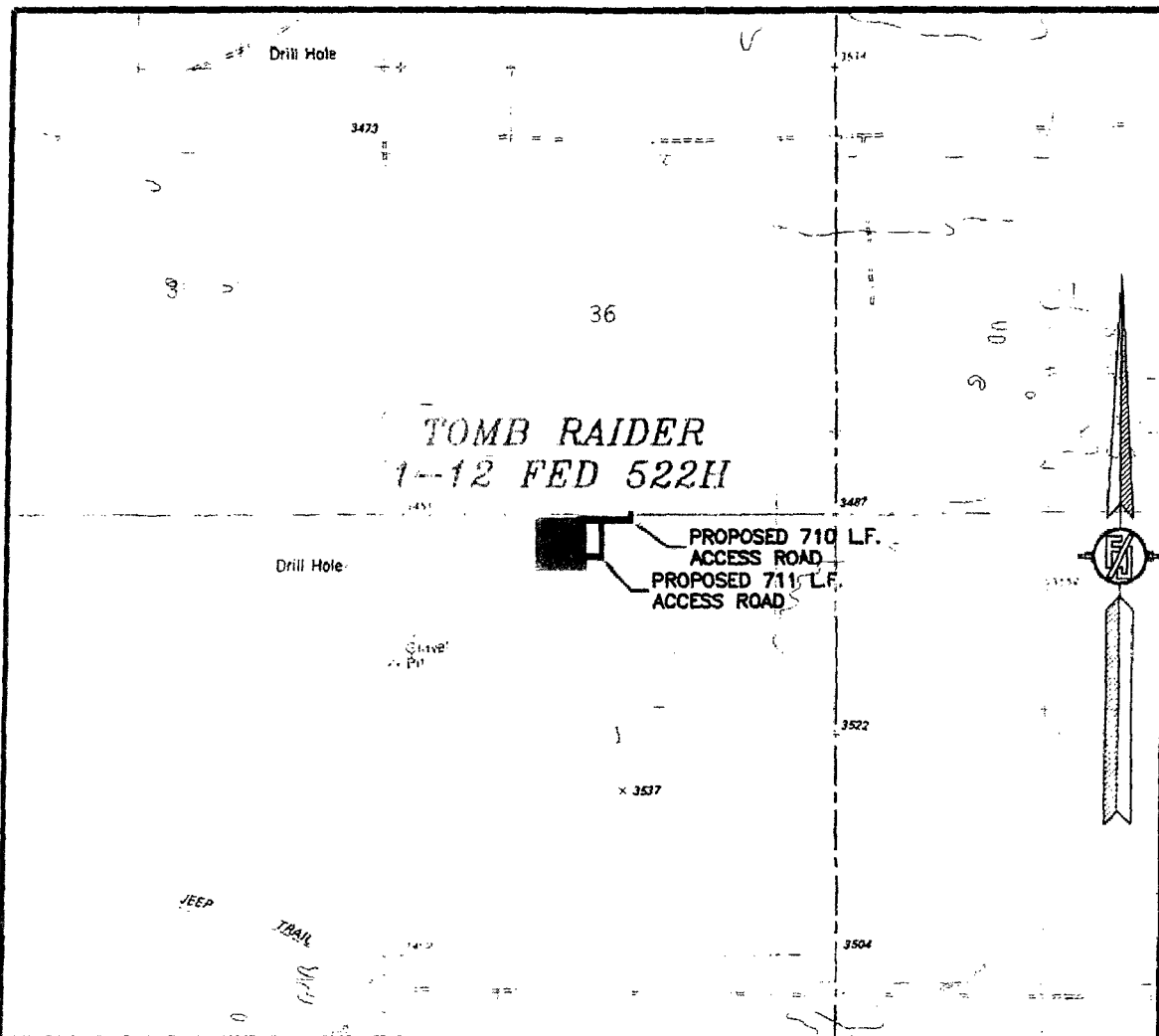
NOVEMBER 9, 2016

SURVEY NO. 6051A

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

331 SOUTH CANA
(575) 234-3341

SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
BOOTLEG RIDGE

NOT TO SCALE

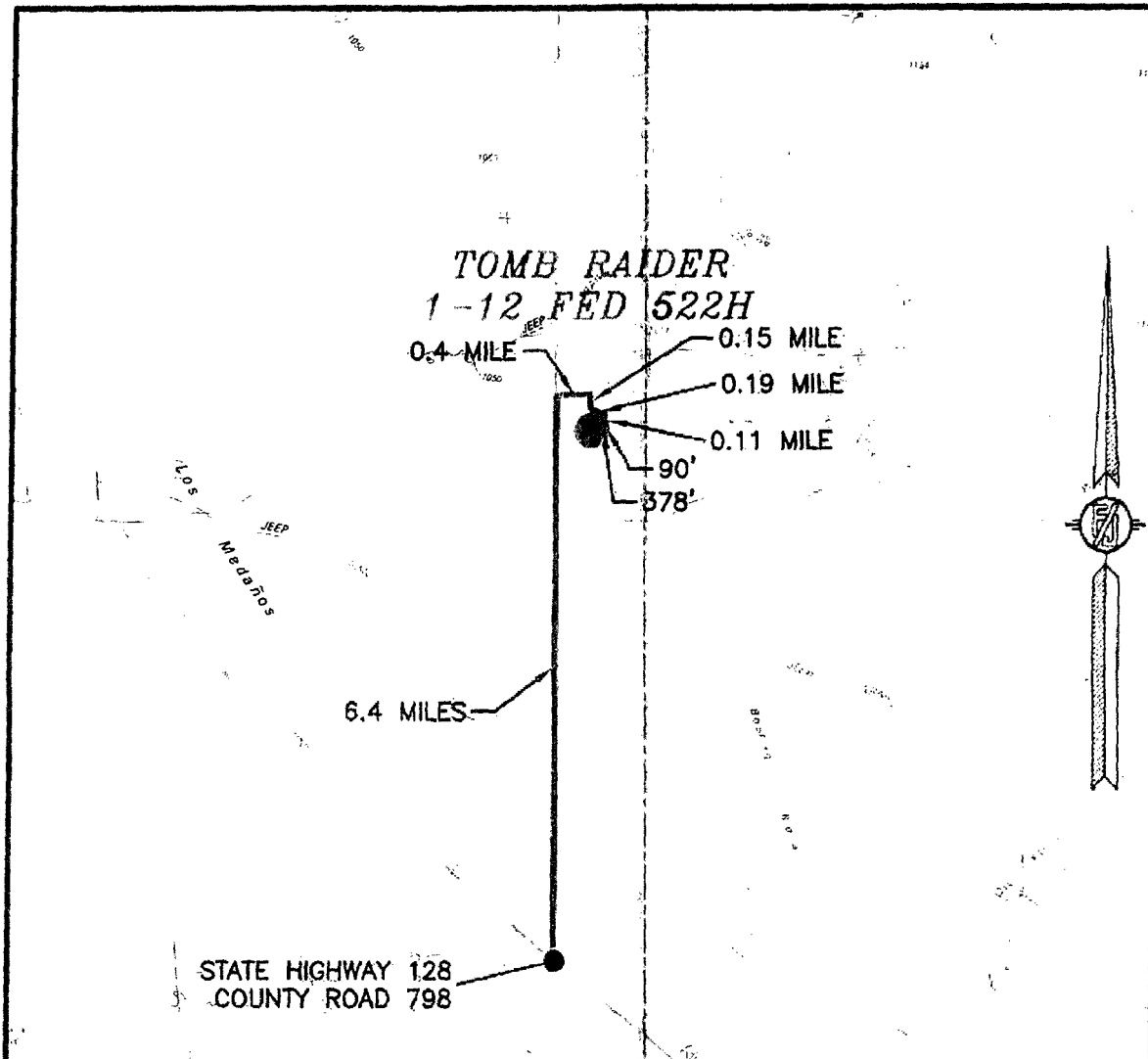
DEVON ENERGY PRODUCTION COMPANY, L.P.
TOMB RAIDER 1-12 FED 522H
LOCATED 360 FT. FROM THE NORTH LINE
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SECTION 1, TOWNSHIP 23 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

NOVEMBER 9, 2016

SURVEY NO. 5051A

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

SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DIRECTIONS TO LOCATION

FROM STATE HIGHWAY 128 AND CR 798 (RED ROAD) GO NORTH ON CR 798 6.4 MILES, TURN RIGHT ON CALICHE ROAD AND GO EAST 0.4 OF A MILE, BEND RIGHT AND GO SOUTH 0.15 OF A MILE, BEND LEFT AND GO SOUTHEAST 0.19 OF A MILE, TURN RIGHT AND GO SOUTH 0.11 OF A MILE TO A PROPOSED ROAD SURVEY WHERE ROAD BENDS LEFT, FOLLOW FLAGS SOUTH 90', THEN WEST 378' TO THE NORTHEAST PAD CORNER FOR THIS LOCATION.

DEVON ENERGY PRODUCTION COMPANY, L.P.

TOMB RAIDER 1-12 FED 522H

LOCATED 360 FT. FROM THE NORTH LINE
AND 1929 FT. FROM THE WEST LINE OF

SECTION 1, TOWNSHIP 23 SOUTH,
RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

NOVEMBER 9, 2016

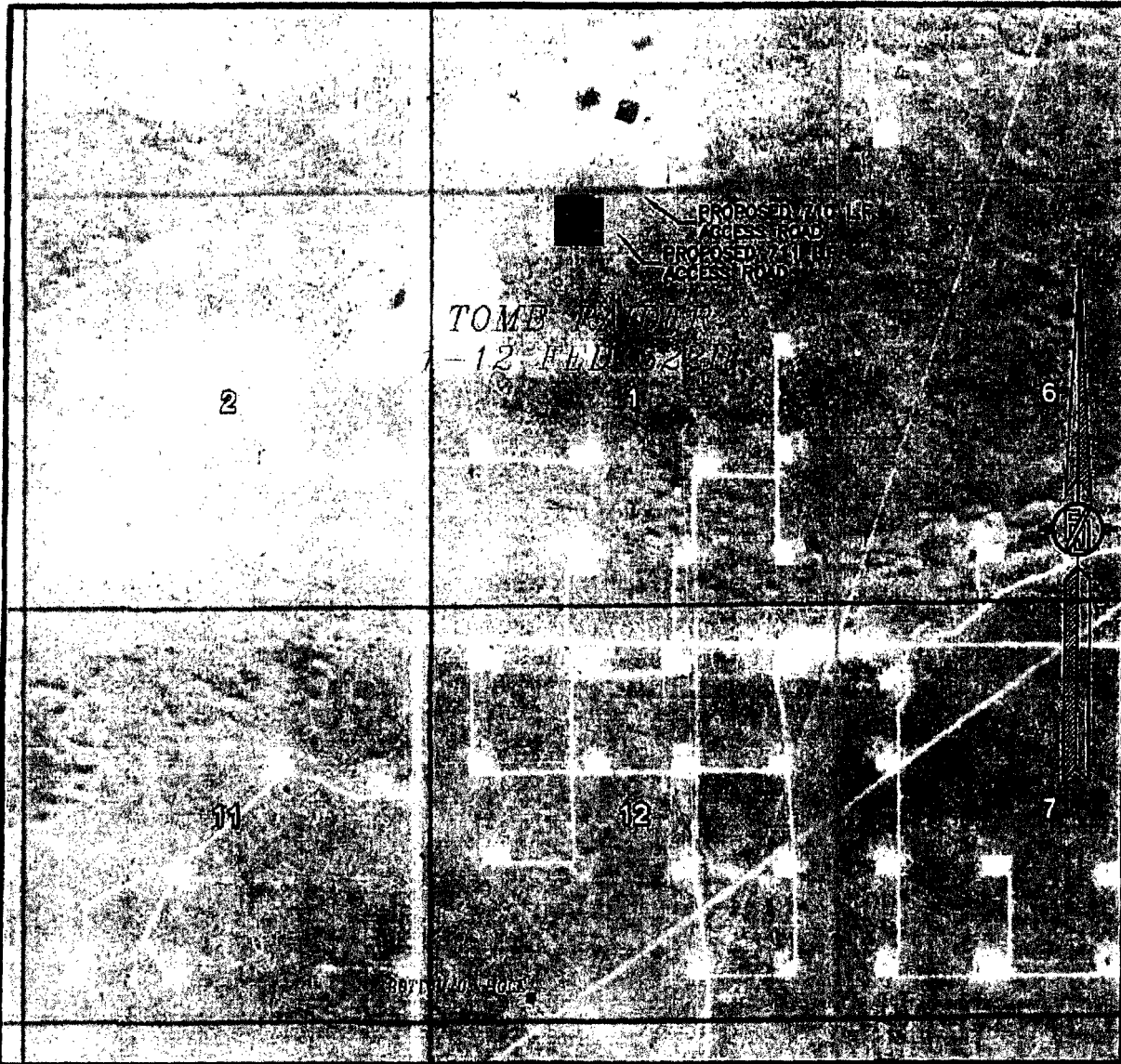
SURVEY NO. 5051A

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

CARLSBAD, NEW MEXICO

SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
FEB. 2014

DEVON ENERGY PRODUCTION COMPANY, L.P.

TOMB RAIDER 1-12 FED 522H

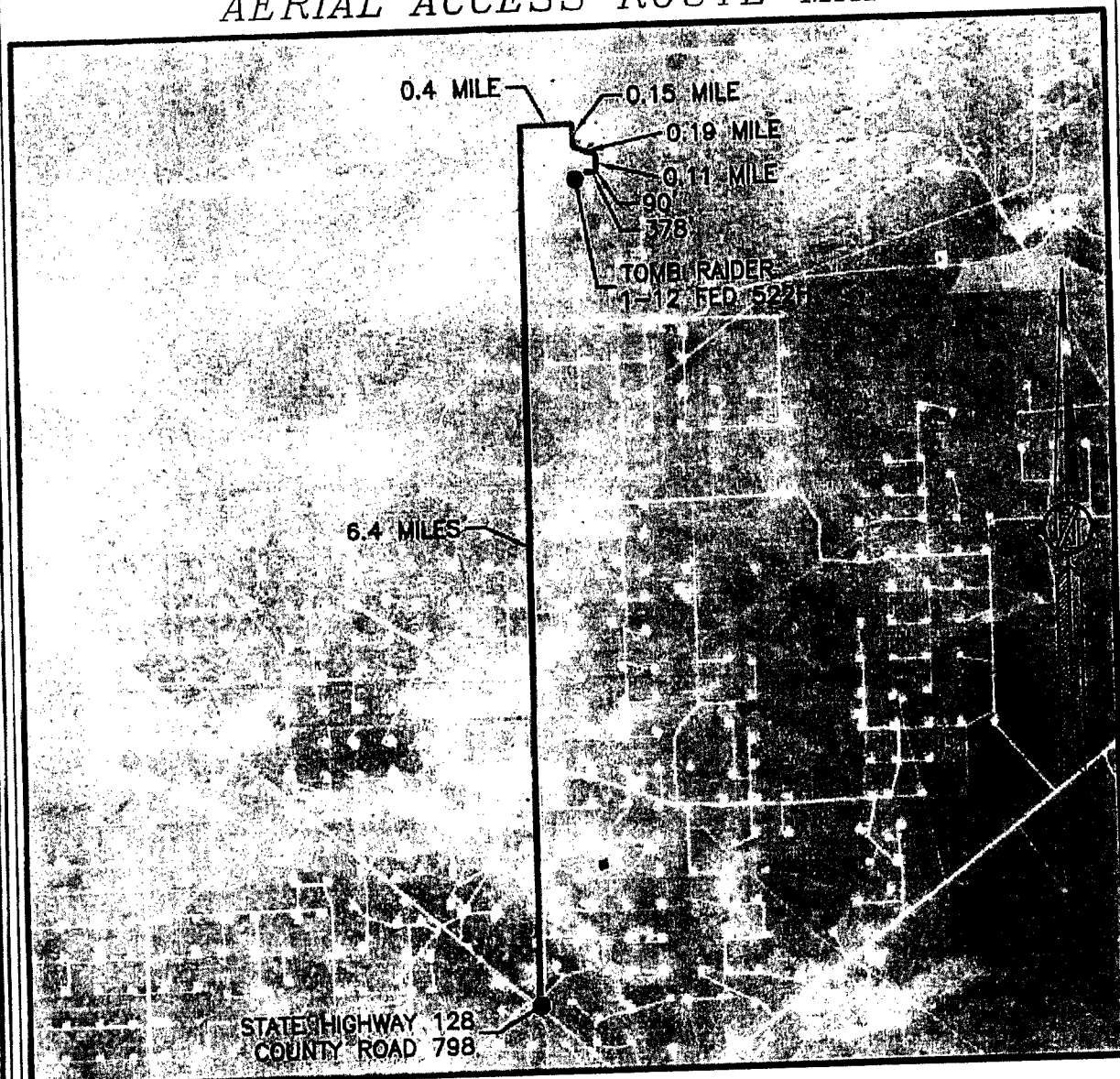
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SECTION 1, TOWNSHIP 23 SOUTH,
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EDDY COUNTY, STATE OF NEW MEXICO

NOVEMBER 9, 2016

SURVEY NO. 5051A

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

SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO
 AERIAL ACCESS ROUTE MAP



NOT TO SCALE
 AERIAL PHOTO:
 GOOGLE EARTH
 FEB. 2014

DEVON ENERGY PRODUCTION COMPANY, L.P.
 TOMB RAIDER 1-12 FED 522H
 LOCATED 360 FT. FROM THE NORTH LINE
 AND 1929 FT. FROM THE WEST LINE OF
 SECTION 1, TOWNSHIP 23 SOUTH,
 RANGE 31 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

NOVEMBER 9, 2016

SURVEY NO. 5051A

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

APD ID: 10400007997

Submission Date: 12/09/2016

Highlighted data
reflects the most
recent changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	UNKNOWN	3467	0	0	ALLUVIUM	NONE	No
2	RUSTLER	2812	655	655	DOLOMITE	NONE	No
3	SALADO	2357	1110	1110	ANHYDRITE	NONE	No
4	BASE OF SALT	-725	4192	4192	SALT	NONE	No
5	DELAWARE	-981	4448	4448	SANDSTONE	NATURAL GAS,OIL	No
6	BELL CANYON	-1023	4490	4490	SANDSTONE	NATURAL GAS,OIL	No
7	CHERRY CANYON	-1903	5370	5370	SANDSTONE	NATURAL GAS,OIL	No
8	BRUSHY CANYON	-3140	6607	6607	SANDSTONE	NATURAL GAS,OIL	No
9	BONE SPRING	-4883	8350	8350	LIMESTONE	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M

Rating Depth: 8175

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.

Testing Procedure: A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested

Choke Diagram Attachment:

TR_1-12_Fed 523H_BOP

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

TR_1-12_Fed 523H_BOP

BOP Diagram Attachment:

TR_1-12_Fed 523H_BOP

Pressure Rating (PSI): 3M

Rating Depth: 4190

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested. The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.

Testing Procedure: A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Choke Diagram Attachment:

TR_1-12_Fed 523H_BOP

BOP Diagram Attachment:

TR_1-12_Fed 523H_BOP

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	700	0	700	-5633	-6333	700	J-55	40	STC	1.74	2.45	BUOY	4.13	BUOY	4.13
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4250	0	4250	-5633	-9883	4250	J-55	40	LTC	1.19	1.42	BUOY	3.98	BUOY	3.98
3	PRODUCTION	8.75	5.5	NEW	API	N	0	18871	0	9100	-5633	-14733	18871	P-110	17	OTHER - BTC	2.18	2.7	BUOY	3.21	BUOY	3.21

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

TR 1-12 Fed 522H_ Surf CSG ASS (2)_11-30-2016.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

TR 1-12 Fed 522H_ INT CSG ASS_11-30-2016.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

TR 1-12 Fed 522H_ Prod CSG ASS_11-30-2016.pdf

Section 4 - Cement

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	700	550	1.34	14.8	730	50	c	1% Calcium Chloride

INTERMEDIATE	Lead		0	3250	720	1.85	12.9	407	30	c	Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sks Poly-E-Flake
INTERMEDIATE	Tail		3250	4250	306	1.33	14.8	407	30	h	0.125 lbs/sks Poly-R- Flake
PRODUCTION	Lead		4050	9050	485	3.27	9	1580	25	tuned	Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
PRODUCTION	Tail		9050	1887 1	2585	1.2	14.5	3100	25	h	Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite

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 times.

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

Circulating Medium Table

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

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
4250	1887 1	WATER-BASED MUD	8.5	9.3				12			
0	700	WATER-BASED MUD	8.5	9				2			
650	4250	SALT SATURATED	10	11				2			

Section 6 - Test, Logging, Coring

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

Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.

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

CALIPER,DS,GR,MWD,MUDLOG

Coring operation description for the well:

na

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4095

Anticipated Surface Pressure: 2093

Anticipated Bottom Hole Temperature(F): 150

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:

TR_1-12_Fed 522H_H2S_12-07-2016.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

TR 1-12 Fed 522H_Dir Plan_11-30-2016.pdf

Other proposed operations facets description:

Multi-Bowl Verbiage

Multi-Bowl Wellhead

Closed Loop Design

Production Casing Cont

Other proposed operations facets attachment:

TR 1-12 Fed 522H_MB Verb 3M_11-30-2016.pdf

TR 1-12 Fed 522H_MB Wellhd_11-30-2016.pdf

TR 1-12 Fed 522H_Clsd Loop_11-30-2016.pdf

TR 1-12 Fed 522H_Prod Cmt Cont_11-30-2016.pdf

Other Variance attachment:

TR 1-12 Fed 522H_Co-flex_11-30-2016.pdf

Casing Assumptions and Load Cases

Surface

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Surface Casing Burst Design		
Load Case	External Pressure	Internal Pressure
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-section plus Test psi
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole section
Displace to Gas	Formation Pore Pressure	Dry gas from next casing point

Surface Casing Collapse Design		
Load Case	External Pressure	Internal Pressure
Full Evacuation	Water gradient in cement, mud above TOC	None
Cementing	Wet cement weight	Water (8.33ppg)

Surface Casing Tension Design	
Load Case	Assumptions
Overpull	100kips
Runing in hole	3 ft/s
Service Loads	N/A

Casing Assumptions and Load Cases

Intermediate

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Intermediate Casing Burst Design		
Load Case	External Pressure	Internal Pressure
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-section plus Test psi
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole section
Fracture @ Shoe	Formation Pore Pressure	Dry gas

Intermediate Casing Collapse Design		
Load Case	External Pressure	Internal Pressure
Full Evacuation	Water gradient in cement, mud above TOC	None
Cementing	Wet cement weight	Water (8.33ppg)

Intermediate Casing Tension Design	
Load Case	Assumptions
Overpull	100kips
Runing in hole	2 ft/s
Service Loads	N/A

Casing Assumptions and Load Cases

Production

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Production Casing Burst Design		
Load Case	External Pressure	Internal Pressure
Pressure Test	Formation Pore Pressure	Fluid in hole (water or produced water) + test psi
Tubing Leak	Formation Pore Pressure	Packer @ KOP, leak below surface 8.6 ppg packer fluid
Stimulation	Formation Pore Pressure	Max frac pressure with heaviest frac fluid

Production Casing Collapse Design		
Load Case	External Pressure	Internal Pressure
Full Evacuation	Water gradient in cement, mud above TOC.	None
Cementing	Wet cement weight	Water (8.33ppg)

Production Casing Tension Design	
Load Case	Assumptions
Overpull	100kips
Runing in hole	2 ft/s
Service Loads	N/A



**Devon Energy Center
333 West Sheridan Avenue
Oklahoma City, Oklahoma 73102-5015**

Hydrogen Sulfide (H₂S) Contingency Plan

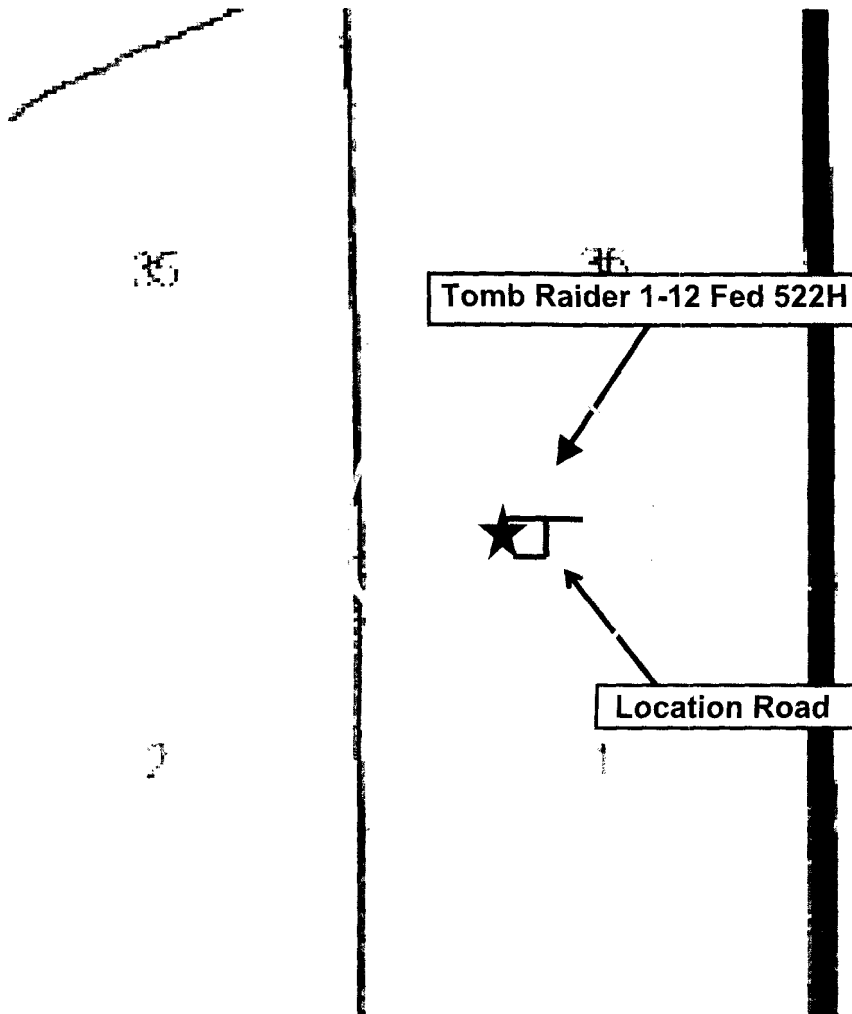
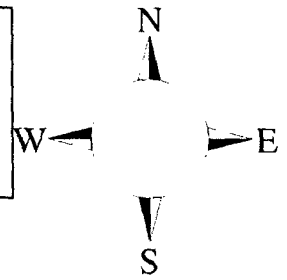
For

Tomb Raider 1-12 Fed 522H

**Sec-1 T-23S R-31E
360' FNL & 1929 FWL
LAT. = 32.3397305' N (NAD83)
LONG = 103.7338085 W**

Eddy County NM

Tomb Raider 1-12 Fed 522H
 This is an open drilling site. H₂S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H₂S, including warning signs, wind indicators and H₂S monitor.



Assumed 100 ppm ROE = 3000' (Radius of Exposure)
 100 ppm H₂S concentration shall trigger activation of this plan.

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'

100 ppm H₂S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must

- **Isolate the area and prevent entry by other persons into the 100 ppm ROE.**
- **Evacuate any public places encompassed by the 100 ppm ROE.**
- **Be equipped with H₂S monitors and air packs in order to control the release.**
- **Use the “buddy system” to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
 - **Detection of H₂S, and**
 - **Measures for protection against the gas,**
 - **Equipment used for protection and emergency response.**

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

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/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

Devon Energy Corp. 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. Devon Energy Corp. Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE (H₂S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H₂S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

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

1. The effects of H₂S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H₂S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operations Plan and the Public Protection Plan.

II. HYDROGEN SULFIDE TRAINING

Note: All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H₂S.

1. Well Control Equipment

- A. Flare line
- B. Choke manifold – Remotely Operated
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- D. Auxiliary equipment may include if applicable: annular preventer and rotating head.
- E. Mud/Gas Separator

2. Protective equipment for essential personnel:

30-minute SCBA units located at briefing areas, as indicated on well site diagram, with one escape unit available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

3. H₂S detection and monitoring equipment:

Portable H₂S monitors positioned on location for best coverage and response. These units have warning lights which activate when H₂S levels reach 10 ppm and audible sirens which activate at 10 ppm. Sensor locations:

- Bell nipple
- Shale shaker
- Trip tank
- Suction pit
- Rig floor
- Cellar
- Choke manifold
- Living Quarters (usually the company man's trailer stairs.)

Visual warning systems:

- A. Wind direction indicators as shown on well site diagram
- B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

4. Mud program:

The mud program has been designed to minimize the volume of H₂S circulated to surface. Proper mud weight, safe drilling practices and the use of H₂S scavengers will minimize hazards when penetrating H₂S bearing zones.

5. Metallurgy:

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H₂S trim.
- B. All elastomers used for packing and seals shall be H₂S trim.

6. Communication:

- A. Company personnel have/use cellular telephones in the field.
- B. Land line (telephone) communications at Office

7. Well testing:

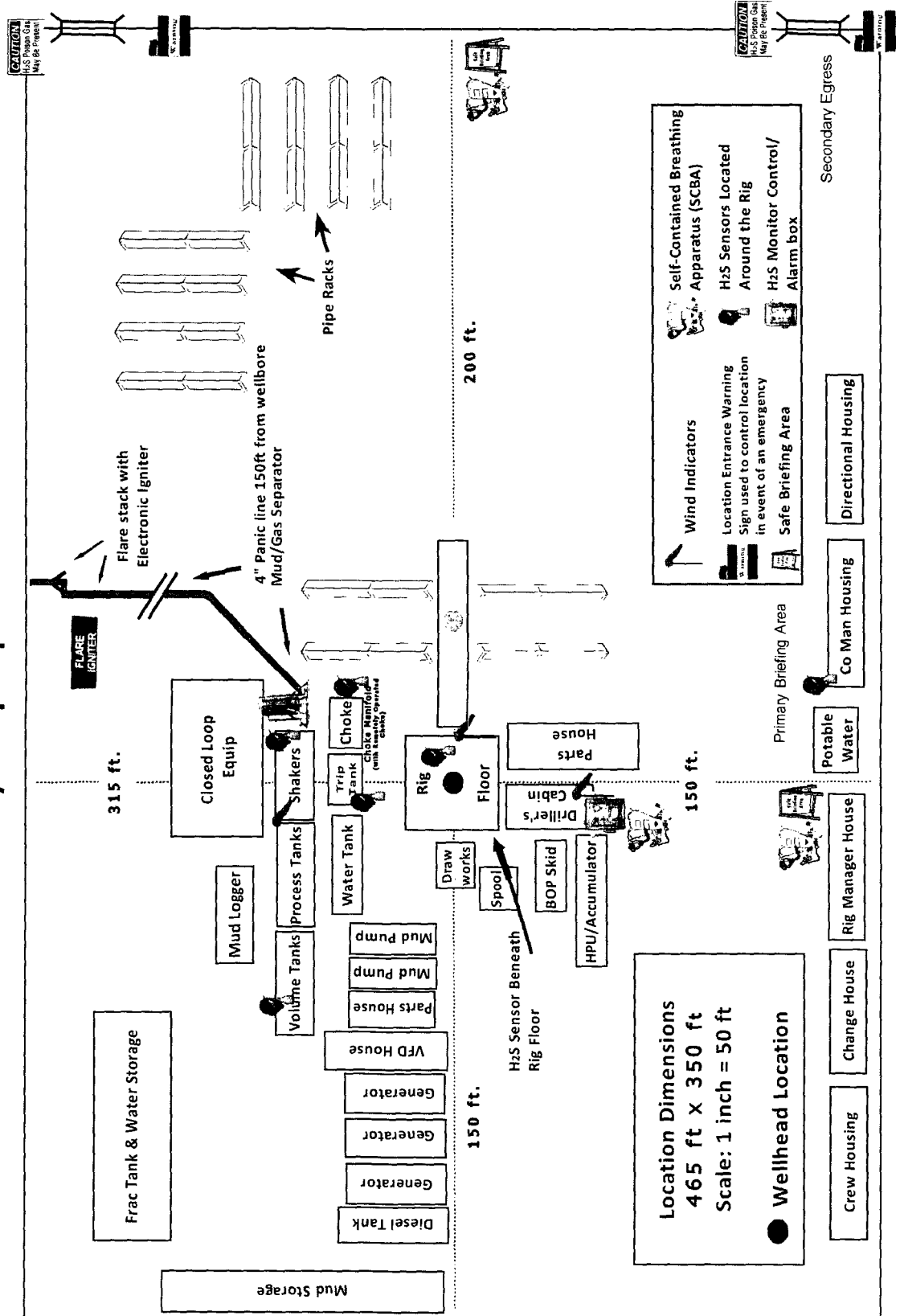
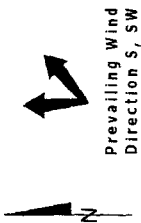
- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H₂S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

<u>Devon Energy Corp. Company Call List</u>		
Drilling Supervisor – Basin – Mark Kramer		405-823-4796
EHS Professional – Laura Wright		405-439-8129
<u>Agency Call List</u>		
<u>Lea County (575)</u>	Hobbs	
	Lea County Communication Authority	393-3981
	State Police	392-5588
	City Police	397-9265
	Sheriff's Office	393-2515
	Ambulance	911
	Fire Department	397-9308
	LEPC (Local Emergency Planning Committee)	393-2870
	NMOCD	393-6161
	US Bureau of Land Management	393-3612
<u>Eddy County (575)</u>	Carlsbad	
	State Police	885-3137
	City Police	885-2111
	Sheriff's Office	887-7551
	Ambulance	911
	Fire Department	885-3125
	LEPC (Local Emergency Planning Committee)	887-3798
	US Bureau of Land Management	887-6544
	NM Emergency Response Commission (Santa Fe)	(505) 476-9600
	24 HR	(505) 827-9126
	National Emergency Response Center	(800) 424-8802
	National Pollution Control Center: Direct	(703) 872-6000
	For Oil Spills	(800) 280-7118
	Emergency Services	
	Wild Well Control	(281) 784-4700
	Cudd Pressure Control	(915) 699-0139 (915) 563-3356
	Halliburton	(575) 746-2757
	B. J. Services	(575) 746-3569
<u>Give GPS position:</u>	Native Air – Emergency Helicopter – Hobbs	(575) 392-6429
	Flight For Life - Lubbock, TX	(806) 743-9911
	Aerocare - Lubbock, TX	(806) 747-8923
	Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
	Lifeguard Air Med Svc. Albuquerque, NM	(800) 222-1222
	Poison Control (24/7)	(575) 272-3115
	Oil & Gas Pipeline 24 Hour Service	(800) 364-4366
	NOAA – Website - www.nhc.noaa.gov	

Prepared in conjunction with
Dave Small



Devon Energy - Well Pad Rig Location Layout Safety Equipment Location



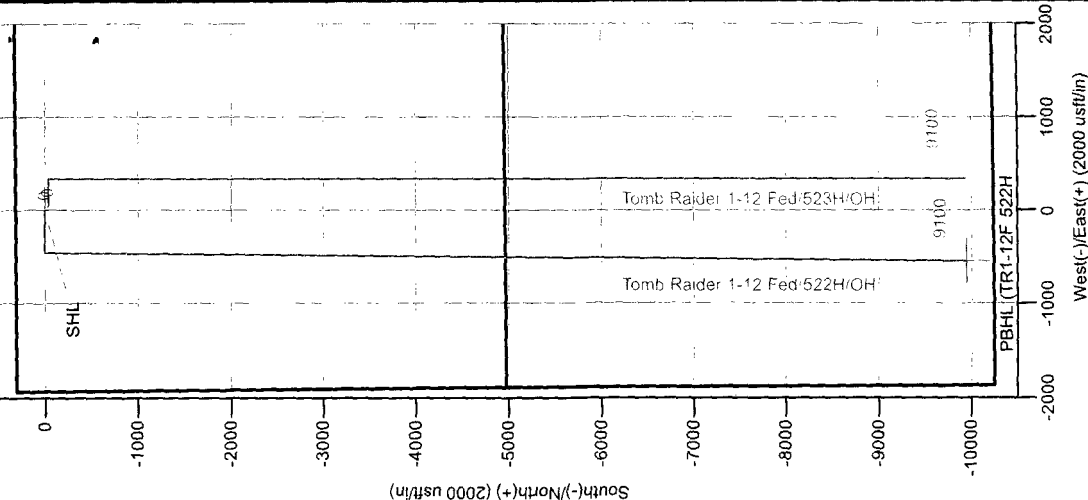


Azimuths to Grid North
 True North: -0.32°
 Magnetic North: 6.75°
 Magnetic Field
 Strength: 48292.1snT
 Dip Angle: 60.18°
 Date: 11/9/2016
 Model: HDGM

Project: Eddy County, NM (NAD-83)
 Site: Tomb Raider 1-12 Fed
 Well: 522H
 Wellbore: OH
 Design: Plan #1



10' SHL (TR1-12F 522H)

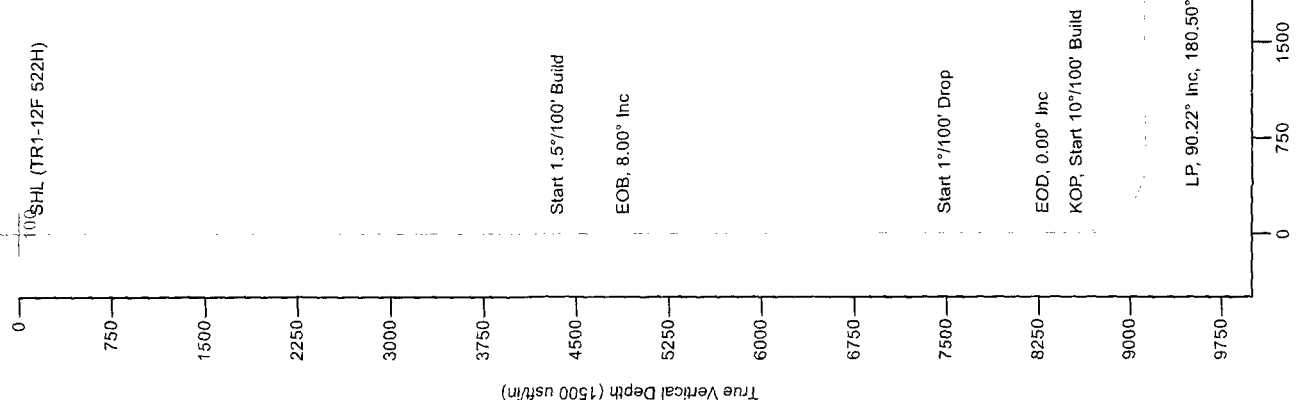


PROJECT DETAILS: Eddy County, NM (NAD-83)	
Geodetic System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	New Mexico Eastern Zone

WELL DETAILS: 522H			
Northing	487884.19	Ground Level:	3467.20
Easting	726495.99	Latitude	32° 20' 23.426 N
Longitude		Longitude	103° 44' 1.708 W

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VFace	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4350.00	0.00	0.00	4350.00	0.00	0.00	0.00	0.00	0.00	
4883.33	8.00	270.00	4881.80	0.00	-37.17	1.50	270.00	0.32	
7518.33	8.00	270.00	7490.96	0.00	-403.89	0.00	0.00	3.52	
8318.33	0.00	0.00	8288.36	0.00	-459.65	1.00	180.00	4.01	
8592.01	0.00	0.00	8562.04	0.00	-459.65	0.00	0.00	4.01	
9494.17	90.22	180.50	9135.00	-575.09	-464.63	10.00	180.50	579.13	
18870.81	90.22	180.50	9099.70	-9951.32	-545.78	0.00	0.00	9955.70	

KOP: 360' FNL / 1469' FWL



Plan #1

PBHL (TR1-12F 522H)

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 522H
Company:	DEVON ENERGY	TVD Reference:	3467.2' GE + 23.5' KB @ 3490.70usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	3467.2' GE + 23.5' KB @ 3490.70usft
Site:	Tomb Raider 1-12 Fed	North Reference:	Grid
Well:	522H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Eddy County, NM (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Tomb Raider 1-12 Fed			
Site Position:		Northing:	48,001.23 usft	Latitude:	31° 7' 50.249 N
From:	Map	Easting:	725,875.87 usft	Longitude:	103° 44' 36.698 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.30 °

Well	522H					
Well Position	+N/-S	439,882.96 usft	Northing:	487,884.19 usft	Latitude:	32° 20' 23.426 N
	+E/-W	620.12 usft	Easting:	726,495.99 usft	Longitude:	103° 44' 1.708 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	3,490.70 usft	Ground Level:	3,467.20 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/9/2016	7.07	60.18	48,292

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	180.50

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,350.00	0.00	0.00	4,350.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,883.33	8.00	270.00	4,881.60	0.00	-37.17	1.50	1.50	0.00	270.00	
7,518.33	8.00	270.00	7,490.96	0.00	-403.89	0.00	0.00	0.00	0.00	
8,318.33	0.00	0.00	8,288.36	0.00	-459.65	1.00	-1.00	0.00	180.00	
8,592.01	0.00	0.00	8,562.04	0.00	-459.65	0.00	0.00	0.00	0.00	
9,494.17	90.22	180.50	9,135.00	-575.09	-464.63	10.00	10.00	-19.90	180.50	
18,870.81	90.22	180.50	9,099.70	-9,951.32	-545.78	0.00	0.00	0.00	0.00	PBHL (TR1-12F 522H)

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
Company: DEVON ENERGY
Project: Eddy County, NM (NAD-83)
Site: Tomb Raider 1-12 Fed
Well: 522H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 522H
TVD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
MD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (TR1-12F 522H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
685.70	0.00	0.00	685.70	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,140.70	0.00	0.00	1,140.70	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,222.70	0.00	0.00	4,222.70	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,350.00	0.00	0.00	4,350.00	0.00	0.00	0.00	0.00	0.00	0.00
Start 1.5°/100' Build									
4,400.00	0.75	270.00	4,400.00	0.00	-0.33	0.00	1.50	1.50	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
Company: DEVON ENERGY
Project: Eddy County, NM (NAD-83)
Site: Tomb Raider 1-12 Fed
Well: 522H
Wellbore: OH
Design: Plan #1

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MD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
4,478.72	1.93	270.00	4,478.70	0.00	-2.17	0.02	1.50	1.50	0.00
Delaware									
4,500.00	2.25	270.00	4,499.96	0.00	-2.94	0.03	1.50	1.50	0.00
4,520.76	2.56	270.00	4,520.70	0.00	-3.82	0.03	1.50	1.50	0.00
Bell Canyon									
4,600.00	3.75	270.00	4,599.82	0.00	-8.18	0.07	1.50	1.50	0.00
4,700.00	5.25	270.00	4,699.51	0.00	-16.02	0.14	1.50	1.50	0.00
4,800.00	6.75	270.00	4,798.96	0.00	-26.48	0.23	1.50	1.50	0.00
4,883.33	8.00	270.00	4,881.60	0.00	-37.17	0.32	1.50	1.50	0.00
EOB, 8.00° Inc									
4,900.00	8.00	270.00	4,898.11	0.00	-39.49	0.34	0.00	0.00	0.00
5,000.00	8.00	270.00	4,997.13	0.00	-53.41	0.47	0.00	0.00	0.00
5,100.00	8.00	270.00	5,096.16	0.00	-67.33	0.59	0.00	0.00	0.00
5,200.00	8.00	270.00	5,195.19	0.00	-81.24	0.71	0.00	0.00	0.00
5,300.00	8.00	270.00	5,294.21	0.00	-95.16	0.83	0.00	0.00	0.00
5,400.00	8.00	270.00	5,393.24	0.00	-109.08	0.95	0.00	0.00	0.00
5,407.53	8.00	270.00	5,400.70	0.00	-110.13	0.96	0.00	0.00	0.00
Cherry Canyon									
5,500.00	8.00	270.00	5,492.27	0.00	-123.00	1.07	0.00	0.00	0.00
5,600.00	8.00	270.00	5,591.29	0.00	-136.91	1.19	0.00	0.00	0.00
5,700.00	8.00	270.00	5,690.32	0.00	-150.83	1.32	0.00	0.00	0.00
5,800.00	8.00	270.00	5,789.35	0.00	-164.75	1.44	0.00	0.00	0.00
5,900.00	8.00	270.00	5,888.37	0.00	-178.67	1.56	0.00	0.00	0.00
6,000.00	8.00	270.00	5,987.40	0.00	-192.58	1.68	0.00	0.00	0.00
6,100.00	8.00	270.00	6,086.43	0.00	-206.50	1.80	0.00	0.00	0.00
6,200.00	8.00	270.00	6,185.46	0.00	-220.42	1.92	0.00	0.00	0.00
6,300.00	8.00	270.00	6,284.48	0.00	-234.34	2.04	0.00	0.00	0.00
6,400.00	8.00	270.00	6,383.51	0.00	-248.25	2.17	0.00	0.00	0.00
6,500.00	8.00	270.00	6,482.54	0.00	-262.17	2.29	0.00	0.00	0.00
6,600.00	8.00	270.00	6,581.56	0.00	-276.09	2.41	0.00	0.00	0.00
6,656.68	8.00	270.00	6,637.69	0.00	-283.98	2.48	0.00	0.00	0.00
Brushy Canyon									
6,700.00	8.00	270.00	6,680.59	0.00	-290.00	2.53	0.00	0.00	0.00
6,800.00	8.00	270.00	6,779.62	0.00	-303.92	2.65	0.00	0.00	0.00
6,900.00	8.00	270.00	6,878.64	0.00	-317.84	2.77	0.00	0.00	0.00
7,000.00	8.00	270.00	6,977.67	0.00	-331.76	2.90	0.00	0.00	0.00
7,100.00	8.00	270.00	7,076.70	0.00	-345.67	3.02	0.00	0.00	0.00
7,200.00	8.00	270.00	7,175.72	0.00	-359.59	3.14	0.00	0.00	0.00
7,300.00	8.00	270.00	7,274.75	0.00	-373.51	3.26	0.00	0.00	0.00
7,400.00	8.00	270.00	7,373.78	0.00	-387.43	3.38	0.00	0.00	0.00
7,500.00	8.00	270.00	7,472.80	0.00	-401.34	3.50	0.00	0.00	0.00
7,518.33	8.00	270.00	7,490.96	0.00	-403.89	3.52	0.00	0.00	0.00
Start 1°/100' Drop									
7,600.00	7.18	270.00	7,571.91	0.00	-414.68	3.62	1.00	-1.00	0.00
7,700.00	6.18	270.00	7,671.23	0.00	-426.32	3.72	1.00	-1.00	0.00
7,800.00	5.18	270.00	7,770.74	0.00	-436.22	3.81	1.00	-1.00	0.00
7,900.00	4.18	270.00	7,870.40	0.00	-444.39	3.88	1.00	-1.00	0.00
8,000.00	3.18	270.00	7,970.19	0.00	-450.81	3.93	1.00	-1.00	0.00
8,100.00	2.18	270.00	8,070.08	0.00	-455.49	3.97	1.00	-1.00	0.00
8,200.00	1.18	270.00	8,170.04	0.00	-458.43	4.00	1.00	-1.00	0.00
8,300.00	0.18	270.00	8,270.03	0.00	-459.62	4.01	1.00	-1.00	0.00
8,318.33	0.00	0.00	8,288.36	0.00	-459.65	4.01	1.00	-1.00	0.00
EOD, 0.00° Inc									

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Eddy County, NM (NAD-83)
 Site: Tomb Raider 1-12 Fed
 Well: 522H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well 522H
 TVD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
 MD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,400.00	0.00	0.00	8,370.03	0.00	-459.65	4.01	0.00	0.00	0.00
8,410.66	0.00	0.00	8,380.68	0.00	-459.65	4.01	0.00	0.00	0.00
1st BS LM									
8,454.66	0.00	0.00	8,424.68	0.00	-459.65	4.01	0.00	0.00	0.00
Leonard A									
8,500.00	0.00	0.00	8,470.03	0.00	-459.65	4.01	0.00	0.00	0.00
8,592.01	0.00	0.00	8,562.04	0.00	-459.65	4.01	0.00	0.00	0.00
KOP, Start 10°/100' Build									
8,600.00	0.80	180.50	8,570.03	-0.06	-459.65	4.07	10.00	10.00	0.00
8,650.00	5.80	180.50	8,619.93	-2.93	-459.68	6.94	10.00	10.00	0.00
8,700.00	10.80	180.50	8,669.39	-10.15	-459.74	14.16	10.00	10.00	0.00
8,750.00	15.80	180.50	8,718.03	-21.64	-459.84	25.66	10.00	10.00	0.00
8,800.00	20.80	180.50	8,765.49	-37.34	-459.98	41.35	10.00	10.00	0.00
8,850.00	25.80	180.50	8,811.40	-57.11	-460.15	61.12	10.00	10.00	0.00
8,900.00	30.80	180.50	8,855.41	-80.80	-460.35	84.81	10.00	10.00	0.00
8,950.00	35.80	180.50	8,897.19	-108.24	-460.59	112.26	10.00	10.00	0.00
9,000.00	40.80	180.50	8,936.41	-139.22	-460.86	143.23	10.00	10.00	0.00
9,011.60	41.96	180.50	8,945.12	-146.89	-460.93	150.90	10.00	10.00	0.00
Leonard B									
9,050.00	45.80	180.50	8,972.79	-173.50	-461.16	177.51	10.00	10.00	0.00
9,100.00	50.80	180.50	9,006.04	-210.81	-461.48	214.83	10.00	10.00	0.00
9,150.00	55.80	180.50	9,035.92	-250.89	-461.83	254.91	10.00	10.00	0.00
9,200.00	60.80	180.50	9,062.18	-293.41	-462.19	297.43	10.00	10.00	0.00
9,250.00	65.80	180.50	9,084.64	-338.06	-462.58	342.09	10.00	10.00	0.00
9,300.00	70.80	180.50	9,103.13	-384.50	-462.98	388.53	10.00	10.00	0.00
9,350.00	75.80	180.50	9,117.49	-432.38	-463.40	436.41	10.00	10.00	0.00
9,400.00	80.80	180.50	9,127.63	-481.32	-463.82	485.35	10.00	10.00	0.00
9,450.00	85.80	180.50	9,133.46	-530.96	-464.25	534.99	10.00	10.00	0.00
9,494.17	90.22	180.50	9,135.00	-575.09	-464.63	579.13	10.00	10.00	0.00
LP, 90.22° Inc, 180.50° Azm									
9,500.00	90.22	180.50	9,134.97	-580.92	-464.68	584.96	0.00	0.00	0.00
9,600.00	90.22	180.50	9,134.60	-680.92	-465.55	684.95	0.00	0.00	0.00
9,700.00	90.22	180.50	9,134.22	-780.91	-466.41	784.95	0.00	0.00	0.00
9,800.00	90.22	180.50	9,133.84	-880.91	-467.28	884.95	0.00	0.00	0.00
9,900.00	90.22	180.50	9,133.47	-980.90	-468.14	984.95	0.00	0.00	0.00
10,000.00	90.22	180.50	9,133.09	-1,080.90	-469.01	1,084.95	0.00	0.00	0.00
10,100.00	90.22	180.50	9,132.72	-1,180.90	-469.87	1,184.95	0.00	0.00	0.00
10,200.00	90.22	180.50	9,132.34	-1,280.89	-470.74	1,284.95	0.00	0.00	0.00
10,300.00	90.22	180.50	9,131.96	-1,380.89	-471.60	1,384.95	0.00	0.00	0.00
10,400.00	90.22	180.50	9,131.59	-1,480.88	-472.47	1,484.95	0.00	0.00	0.00
10,500.00	90.22	180.50	9,131.21	-1,580.88	-473.34	1,584.95	0.00	0.00	0.00
10,600.00	90.22	180.50	9,130.83	-1,680.87	-474.20	1,684.95	0.00	0.00	0.00
10,700.00	90.22	180.50	9,130.46	-1,780.87	-475.07	1,784.95	0.00	0.00	0.00
10,800.00	90.22	180.50	9,130.08	-1,880.86	-475.93	1,884.95	0.00	0.00	0.00
10,900.00	90.22	180.50	9,129.70	-1,980.86	-476.80	1,984.95	0.00	0.00	0.00
11,000.00	90.22	180.50	9,129.33	-2,080.86	-477.66	2,084.95	0.00	0.00	0.00
11,100.00	90.22	180.50	9,128.95	-2,180.85	-478.53	2,184.94	0.00	0.00	0.00
11,200.00	90.22	180.50	9,128.57	-2,280.85	-479.39	2,284.94	0.00	0.00	0.00
11,300.00	90.22	180.50	9,128.20	-2,380.84	-480.26	2,384.94	0.00	0.00	0.00
11,400.00	90.22	180.50	9,127.82	-2,480.84	-481.12	2,484.94	0.00	0.00	0.00
11,500.00	90.22	180.50	9,127.45	-2,580.83	-481.99	2,584.94	0.00	0.00	0.00
11,600.00	90.22	180.50	9,127.07	-2,680.83	-482.86	2,684.94	0.00	0.00	0.00
11,700.00	90.22	180.50	9,126.69	-2,780.82	-483.72	2,784.94	0.00	0.00	0.00
11,800.00	90.22	180.50	9,126.32	-2,880.82	-484.59	2,884.94	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
Company: DEVON ENERGY
Project: Eddy County, NM (NAD-83)
Site: Tomb Raider 1-12 Fed
Well: 522H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 522H
TVD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
MD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,900.00	90.22	180.50	9,125.94	-2,980.82	-485.45	2,984.94	0.00	0.00	0.00
12,000.00	90.22	180.50	9,125.56	-3,080.81	-486.32	3,084.94	0.00	0.00	0.00
12,100.00	90.22	180.50	9,125.19	-3,180.81	-487.18	3,184.94	0.00	0.00	0.00
12,200.00	90.22	180.50	9,124.81	-3,280.80	-488.05	3,284.94	0.00	0.00	0.00
12,300.00	90.22	180.50	9,124.43	-3,380.80	-488.91	3,384.94	0.00	0.00	0.00
12,400.00	90.22	180.50	9,124.06	-3,480.79	-489.78	3,484.94	0.00	0.00	0.00
12,500.00	90.22	180.50	9,123.68	-3,580.79	-490.64	3,584.93	0.00	0.00	0.00
12,600.00	90.22	180.50	9,123.30	-3,680.78	-491.51	3,684.93	0.00	0.00	0.00
12,700.00	90.22	180.50	9,122.93	-3,780.78	-492.37	3,784.93	0.00	0.00	0.00
12,800.00	90.22	180.50	9,122.55	-3,880.78	-493.24	3,884.93	0.00	0.00	0.00
12,900.00	90.22	180.50	9,122.18	-3,980.77	-494.11	3,984.93	0.00	0.00	0.00
13,000.00	90.22	180.50	9,121.80	-4,080.77	-494.97	4,084.93	0.00	0.00	0.00
13,100.00	90.22	180.50	9,121.42	-4,180.76	-495.84	4,184.93	0.00	0.00	0.00
13,200.00	90.22	180.50	9,121.05	-4,280.76	-496.70	4,284.93	0.00	0.00	0.00
13,300.00	90.22	180.50	9,120.67	-4,380.75	-497.57	4,384.93	0.00	0.00	0.00
13,400.00	90.22	180.50	9,120.29	-4,480.75	-498.43	4,484.93	0.00	0.00	0.00
13,500.00	90.22	180.50	9,119.92	-4,580.74	-499.30	4,584.93	0.00	0.00	0.00
13,600.00	90.22	180.50	9,119.54	-4,680.74	-500.16	4,684.93	0.00	0.00	0.00
13,700.00	90.22	180.50	9,119.16	-4,780.74	-501.03	4,784.93	0.00	0.00	0.00
13,800.00	90.22	180.50	9,118.79	-4,880.73	-501.89	4,884.93	0.00	0.00	0.00
13,900.00	90.22	180.50	9,118.41	-4,980.73	-502.76	4,984.92	0.00	0.00	0.00
14,000.00	90.22	180.50	9,118.03	-5,080.72	-503.62	5,084.92	0.00	0.00	0.00
14,100.00	90.22	180.50	9,117.66	-5,180.72	-504.49	5,184.92	0.00	0.00	0.00
14,200.00	90.22	180.50	9,117.28	-5,280.71	-505.36	5,284.92	0.00	0.00	0.00
14,300.00	90.22	180.50	9,116.91	-5,380.71	-506.22	5,384.92	0.00	0.00	0.00
14,400.00	90.22	180.50	9,116.53	-5,480.70	-507.09	5,484.92	0.00	0.00	0.00
14,500.00	90.22	180.50	9,116.15	-5,580.70	-507.95	5,584.92	0.00	0.00	0.00
14,600.00	90.22	180.50	9,115.78	-5,680.70	-508.82	5,684.92	0.00	0.00	0.00
14,700.00	90.22	180.50	9,115.40	-5,780.69	-509.68	5,784.92	0.00	0.00	0.00
14,800.00	90.22	180.50	9,115.02	-5,880.69	-510.55	5,884.92	0.00	0.00	0.00
14,900.00	90.22	180.50	9,114.65	-5,980.68	-511.41	5,984.92	0.00	0.00	0.00
15,000.00	90.22	180.50	9,114.27	-6,080.68	-512.28	6,084.92	0.00	0.00	0.00
15,100.00	90.22	180.50	9,113.89	-6,180.67	-513.14	6,184.92	0.00	0.00	0.00
15,200.00	90.22	180.50	9,113.52	-6,280.67	-514.01	6,284.92	0.00	0.00	0.00
15,300.00	90.22	180.50	9,113.14	-6,380.66	-514.87	6,384.91	0.00	0.00	0.00
15,400.00	90.22	180.50	9,112.76	-6,480.66	-515.74	6,484.91	0.00	0.00	0.00
15,500.00	90.22	180.50	9,112.39	-6,580.66	-516.61	6,584.91	0.00	0.00	0.00
15,600.00	90.22	180.50	9,112.01	-6,680.65	-517.47	6,684.91	0.00	0.00	0.00
15,700.00	90.22	180.50	9,111.64	-6,780.65	-518.34	6,784.91	0.00	0.00	0.00
15,800.00	90.22	180.50	9,111.26	-6,880.64	-519.20	6,884.91	0.00	0.00	0.00
15,900.00	90.22	180.50	9,110.88	-6,980.64	-520.07	6,984.91	0.00	0.00	0.00
16,000.00	90.22	180.50	9,110.51	-7,080.63	-520.93	7,084.91	0.00	0.00	0.00
16,100.00	90.22	180.50	9,110.13	-7,180.63	-521.80	7,184.91	0.00	0.00	0.00
16,200.00	90.22	180.50	9,109.75	-7,280.62	-522.66	7,284.91	0.00	0.00	0.00
16,300.00	90.22	180.50	9,109.38	-7,380.62	-523.53	7,384.91	0.00	0.00	0.00
16,400.00	90.22	180.50	9,109.00	-7,480.62	-524.39	7,484.91	0.00	0.00	0.00
16,500.00	90.22	180.50	9,108.62	-7,580.61	-525.26	7,584.91	0.00	0.00	0.00
16,600.00	90.22	180.50	9,108.25	-7,680.61	-526.12	7,684.91	0.00	0.00	0.00
16,700.00	90.22	180.50	9,107.87	-7,780.60	-526.99	7,784.90	0.00	0.00	0.00
16,800.00	90.22	180.50	9,107.50	-7,880.60	-527.86	7,884.90	0.00	0.00	0.00
16,900.00	90.22	180.50	9,107.12	-7,980.59	-528.72	7,984.90	0.00	0.00	0.00
17,000.00	90.22	180.50	9,106.74	-8,080.59	-529.59	8,084.90	0.00	0.00	0.00
17,100.00	90.22	180.50	9,106.37	-8,180.58	-530.45	8,184.90	0.00	0.00	0.00
17,200.00	90.22	180.50	9,105.99	-8,280.58	-531.32	8,284.90	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
Company: DEVON ENERGY
Project: Eddy County, NM (NAD-83)
Site: Tomb Raider 1-12 Fed
Well: 522H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 522H
TVD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
MD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,300.00	90.22	180.50	9,105.61	-8,380.58	-532.18	8,384.90	0.00	0.00	0.00
17,400.00	90.22	180.50	9,105.24	-8,480.57	-533.05	8,484.90	0.00	0.00	0.00
17,500.00	90.22	180.50	9,104.86	-8,580.57	-533.91	8,584.90	0.00	0.00	0.00
17,600.00	90.22	180.50	9,104.48	-8,680.56	-534.78	8,684.90	0.00	0.00	0.00
17,700.00	90.22	180.50	9,104.11	-8,780.56	-535.64	8,784.90	0.00	0.00	0.00
17,800.00	90.22	180.50	9,103.73	-8,880.55	-536.51	8,884.90	0.00	0.00	0.00
17,900.00	90.22	180.50	9,103.35	-8,980.55	-537.38	8,984.90	0.00	0.00	0.00
18,000.00	90.22	180.50	9,102.98	-9,080.54	-538.24	9,084.90	0.00	0.00	0.00
18,100.00	90.22	180.50	9,102.60	-9,180.54	-539.11	9,184.89	0.00	0.00	0.00
18,200.00	90.22	180.50	9,102.23	-9,280.54	-539.97	9,284.89	0.00	0.00	0.00
18,300.00	90.22	180.50	9,101.85	-9,380.53	-540.84	9,384.89	0.00	0.00	0.00
18,400.00	90.22	180.50	9,101.47	-9,480.53	-541.70	9,484.89	0.00	0.00	0.00
18,500.00	90.22	180.50	9,101.10	-9,580.52	-542.57	9,584.89	0.00	0.00	0.00
18,600.00	90.22	180.50	9,100.72	-9,680.52	-543.43	9,684.89	0.00	0.00	0.00
18,700.00	90.22	180.50	9,100.34	-9,780.51	-544.30	9,784.89	0.00	0.00	0.00
18,800.00	90.22	180.50	9,099.97	-9,880.51	-545.16	9,884.89	0.00	0.00	0.00
18,870.81	90.22	180.50	9,099.70	-9,951.32	-545.78	9,955.70	0.00	0.00	0.00

TD at 18870.81' MD - PBHL (TR1-12F 522H)

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SHL (TR1-12F 522H)	0.00	0.00	0.00	0.00	0.00	487,884.19	726,495.99	32° 20' 23.426 N	103° 44' 1.708 W
- plan hits target center									
- Point									
PBHL (TR1-12F 522H)	0.00	0.00	9,099.70	-9,951.32	-545.78	477,932.87	725,950.21	32° 18' 44.984 N	103° 44' 8.716 W
- plan hits target center									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
685.70	685.70	Rustler		-0.22	180.50
1,140.70	1,140.70	Salado		-0.22	180.50
4,222.70	4,222.70	Base Salt		-0.22	180.50
4,478.72	4,478.70	Delaware		-0.22	180.50
4,520.76	4,520.70	Bell Canyon		-0.22	180.50
5,407.53	5,400.70	Cherry Canyon		-0.22	180.50
6,656.68	6,637.69	Brushy Canyon		-0.22	180.50
8,410.66	8,380.68	1st BS LM		-0.22	180.50
8,454.66	8,424.68	Leonard A		-0.22	180.50
9,011.60	8,945.12	Leonard B		-0.22	180.50

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
Company: DEVON ENERGY
Project: Eddy County, NM (NAD-83)
Site: Tomb Raider 1-12 Fed
Well: 522H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 522H
TVD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
MD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,350.00	4,350.00	0.00	0.00	Start 1.5°/100' Build
4,883.33	4,881.60	0.00	-37.17	EOB, 8.00° Inc
7,518.33	7,490.96	0.00	-403.89	Start 1°/100' Drop
8,318.33	8,288.36	0.00	-459.65	EOD, 0.00° Inc
8,592.01	8,562.04	0.00	-459.65	KOP, Start 10°/100' Build
9,494.17	9,135.00	-575.09	-464.63	LP, 90.22° Inc, 180.50° Azm
18,870.81	9,099.70	-9,951.32	-545.78	TD at 18870.81' MD

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 522H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	3467.2' GE + 23.5' KB @ 3490.70usft
Reference Site:	Tomb Raider 1-12 Fed	MD Reference:	3467.2' GE + 23.5' KB @ 3490.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	522H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.00usft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 9,999.98 usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic
Casing Method:	Not applied

Survey Tool Program Date 11/9/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	18,870.13	Plan #1 (OH)	LEAM MWD-ADJ	MWD - Standard

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Tomb Raider 1-12 Fed						
523H - OH - Plan #1	4,300.00	4,300.00	49.92	30.86	2.620	CC
523H - OH - Plan #1	4,400.00	4,399.73	50.25	30.76	2.579	ES
523H - OH - Plan #1	18,870.81	18,810.38	880.00	516.25	2.419	SF

Offset Design Tomb Raider 1-12 Fed - 523H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	0.00	0.00	0.00	143.03	-39.88	30.02	49.92				
100.00	100.00	100.00	100.00	0.09	0.09	143.03	-39.88	30.02	49.92	49.74	0.17	290.300	
200.00	200.00	200.00	200.00	0.31	0.31	143.03	-39.88	30.02	49.92	49.29	0.62	80.318	
300.00	300.00	300.00	300.00	0.54	0.54	143.03	-39.88	30.02	49.92	48.85	1.07	46.607	
400.00	400.00	400.00	400.00	0.76	0.76	143.03	-39.88	30.02	49.92	48.40	1.52	32.828	
500.00	500.00	500.00	500.00	0.99	0.99	143.03	-39.88	30.02	49.92	47.95	1.97	25.337	
600.00	600.00	600.00	600.00	1.21	1.21	143.03	-39.88	30.02	49.92	47.50	2.42	20.630	
700.00	700.00	700.00	700.00	1.43	1.43	143.03	-39.88	30.02	49.92	47.05	2.87	17.398	
800.00	800.00	800.00	800.00	1.66	1.66	143.03	-39.88	30.02	49.92	46.60	3.32	15.041	
900.00	900.00	900.00	900.00	1.88	1.88	143.03	-39.88	30.02	49.92	46.15	3.77	13.247	
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	143.03	-39.88	30.02	49.92	45.70	4.22	11.835	
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	143.03	-39.88	30.02	49.92	45.25	4.67	10.695	
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	143.03	-39.88	30.02	49.92	44.80	5.12	9.755	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	143.03	-39.88	30.02	49.92	44.35	5.57	8.968	
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	143.03	-39.88	30.02	49.92	43.90	6.02	8.297	
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	143.03	-39.88	30.02	49.92	43.45	6.47	7.720	
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	143.03	-39.88	30.02	49.92	43.00	6.91	7.219	
1,700.00	1,700.00	1,700.00	1,700.00	3.68	3.68	143.03	-39.88	30.02	49.92	42.55	7.36	6.778	
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	143.03	-39.88	30.02	49.92	42.10	7.81	6.388	
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	143.03	-39.88	30.02	49.92	41.65	8.26	6.041	
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	143.03	-39.88	30.02	49.92	41.20	8.71	5.729	
2,100.00	2,100.00	2,100.00	2,100.00	4.58	4.58	143.03	-39.88	30.02	49.92	40.75	9.16	5.448	
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	143.03	-39.88	30.02	49.92	40.30	9.61	5.193	
2,300.00	2,300.00	2,300.00	2,300.00	5.03	5.03	143.03	-39.88	30.02	49.92	39.85	10.06	4.961	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
Project: Eddy County, NM (NAD-83)
Reference Site: Tomb Raider 1-12 Fed
Site Error: 0.00 usft
Reference Well: 522H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 522H
TVD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
MD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Tomb Raider 1-12 Fed - 523H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
2,400.00	2,400.00	2,400.00	2,400.00	5.26	5.26	143.03	-39.88	30.02	49.92	39.40	10.51	4.749		
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	143.03	-39.88	30.02	49.92	38.96	10.96	4.554		
2,600.00	2,600.00	2,600.00	2,600.00	5.71	5.71	143.03	-39.88	30.02	49.92	38.51	11.41	4.375		
2,700.00	2,700.00	2,700.00	2,700.00	5.93	5.93	143.03	-39.88	30.02	49.92	38.06	11.86	4.209		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	143.03	-39.88	30.02	49.92	37.61	12.31	4.055		
2,900.00	2,900.00	2,900.00	2,900.00	6.38	6.38	143.03	-39.88	30.02	49.92	37.16	12.76	3.912		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	143.03	-39.88	30.02	49.92	36.71	13.21	3.779		
3,100.00	3,100.00	3,100.00	3,100.00	6.83	6.83	143.03	-39.88	30.02	49.92	36.26	13.66	3.655		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	143.03	-39.88	30.02	49.92	35.81	14.11	3.538		
3,300.00	3,300.00	3,300.00	3,300.00	7.28	7.28	143.03	-39.88	30.02	49.92	35.36	14.56	3.429		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	143.03	-39.88	30.02	49.92	34.91	15.01	3.326		
3,500.00	3,500.00	3,500.00	3,500.00	7.73	7.73	143.03	-39.88	30.02	49.92	34.46	15.46	3.230		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	143.03	-39.88	30.02	49.92	34.01	15.91	3.138		
3,700.00	3,700.00	3,700.00	3,700.00	8.18	8.18	143.03	-39.88	30.02	49.92	33.56	16.36	3.052		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	143.03	-39.88	30.02	49.92	33.11	16.80	2.970		
3,900.00	3,900.00	3,900.00	3,900.00	8.63	8.63	143.03	-39.88	30.02	49.92	32.66	17.25	2.893		
4,000.00	4,000.00	4,000.00	4,000.00	8.85	8.85	143.03	-39.88	30.02	49.92	32.21	17.70	2.820		
4,100.00	4,100.00	4,100.00	4,100.00	9.08	9.08	143.03	-39.88	30.02	49.92	31.76	18.15	2.750		
4,200.00	4,200.00	4,200.00	4,200.00	9.30	9.30	143.03	-39.88	30.02	49.92	31.31	18.60	2.683		
4,300.00	4,300.00	4,300.00	4,300.00	9.53	9.53	143.03	-39.88	30.02	49.92	30.86	19.05	2.620 CC		
4,328.15	4,328.15	4,328.15	4,328.15	9.59	9.59	-127.02	-39.88	30.02	49.95	30.77	19.18	2.605		
4,400.00	4,400.00	4,399.73	4,399.73	9.74	9.74	-127.46	-39.88	30.24	50.25	30.76	19.49	2.579 ES		
4,500.00	4,499.96	4,499.07	4,499.05	9.94	9.94	-131.14	-39.88	31.96	53.00	33.13	19.87	2.667		
4,600.00	4,599.82	4,598.01	4,597.93	10.14	10.14	-137.39	-39.88	35.39	59.09	36.84	20.25	2.918		
4,700.00	4,699.51	4,696.30	4,696.09	10.35	10.33	-144.52	-39.88	40.48	69.25	48.63	20.62	3.359		
4,800.00	4,798.96	4,793.69	4,793.24	10.56	10.53	-151.18	-39.88	47.19	83.96	63.00	20.96	4.006		
4,900.00	4,898.11	4,889.93	4,889.13	10.77	10.74	-156.74	-39.88	55.44	103.36	82.06	21.30	4.853		
5,000.00	4,997.13	4,985.96	4,984.67	11.00	10.94	-160.98	-39.88	65.17	125.72	104.04	21.68	5.798		
5,100.00	5,096.16	5,082.99	5,081.17	11.23	11.15	-164.01	-39.88	75.31	148.86	126.79	22.08	6.743		
5,200.00	5,195.19	5,180.02	5,177.67	11.47	11.37	-166.22	-39.88	85.45	172.29	149.82	22.47	7.667		
5,300.00	5,294.21	5,277.05	5,274.16	11.71	11.58	-167.91	-39.88	95.59	195.91	173.04	22.87	8.566		
5,400.00	5,393.24	5,374.08	5,370.66	11.95	11.80	-169.23	-39.88	105.74	219.65	196.38	23.27	9.438		
5,500.00	5,492.27	5,471.11	5,467.16	12.20	12.03	-170.29	-39.88	115.88	243.48	219.80	23.68	10.282		
5,600.00	5,591.29	5,568.14	5,563.66	12.46	12.25	-171.16	-39.88	126.02	267.37	243.29	24.09	11.100		
5,700.00	5,690.32	5,665.17	5,660.16	12.72	12.48	-171.89	-39.88	136.16	291.32	266.82	24.50	11.891		
5,800.00	5,789.35	5,762.20	5,756.65	12.98	12.71	-172.51	-39.88	146.31	315.30	290.39	24.91	12.656		
5,900.00	5,888.37	5,859.23	5,853.15	13.24	12.94	-173.05	-39.88	156.45	339.31	313.98	25.33	13.397		
6,000.00	5,987.40	5,956.26	5,949.65	13.51	13.18	-173.51	-39.88	166.59	363.35	337.60	25.75	14.113		
6,100.00	6,086.43	6,053.29	6,046.15	13.79	13.41	-173.91	-39.88	176.73	387.40	361.24	26.16	14.806		
6,200.00	6,185.46	6,150.32	6,142.65	14.06	13.65	-174.27	-39.88	186.87	411.47	384.89	26.59	15.477		
6,300.00	6,284.48	6,247.35	6,239.15	14.34	13.89	-174.59	-39.88	197.02	435.56	408.55	27.01	16.127		
6,400.00	6,383.51	6,344.38	6,335.64	14.62	14.13	-174.87	-39.88	207.16	459.65	432.22	27.43	16.755		
6,500.00	6,482.54	6,441.41	6,432.14	14.90	14.37	-175.13	-39.88	217.30	483.76	455.90	27.86	17.364		
6,600.00	6,581.56	6,538.44	6,528.64	15.19	14.62	-175.36	-39.88	227.44	507.87	479.59	28.29	17.954		
6,700.00	6,680.59	6,635.47	6,625.14	15.48	14.87	-175.57	-39.88	237.59	531.99	503.28	28.72	18.526		
6,800.00	6,779.62	6,732.50	6,721.64	15.76	15.11	-175.76	-39.88	247.73	556.12	526.97	29.15	19.080		
6,900.00	6,878.64	6,829.53	6,818.13	16.06	15.36	-175.94	-39.88	257.87	580.25	550.67	29.58	19.617		
7,000.00	6,977.67	6,926.56	6,914.63	16.35	15.61	-176.10	-39.88	268.01	604.39	574.38	30.01	20.138		
7,100.00	7,076.70	7,027.27	7,014.81	16.64	15.85	-176.26	-39.88	278.34	628.35	597.90	30.44	20.639		
7,200.00	7,175.72	7,130.28	7,117.37	16.94	16.08	-176.40	-39.88	288.05	651.49	620.62	30.87	21.104		
7,300.00	7,274.75	7,233.73	7,220.44	17.24	16.30	-176.52	-39.88	296.87	673.75	642.45	31.30	21.526		
7,400.00	7,373.78	7,337.61	7,324.01	17.54	16.52	-176.64	-39.88	304.79	695.14	663.41	31.73	21.908		

CC - Min centre to center distance or convergent point, SF - min separation factor. ES - min ellipse separation

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
Project: Eddy County, NM (NAD-83)
Reference Site: Tomb Raider 1-12 Fed
Site Error: 0.00 usft
Reference Well: 522H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 522H
TVD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
MD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Tomb Raider 1-12 Fed - 523H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,500.00	7,472.80	7,441.88	7,428.05	17.84	16.74	-176.74	-39.88	311.79	715.65	683.49	32.16	22.251	
7,600.00	7,571.91	7,546.67	7,532.66	18.12	16.96	-176.84	-39.88	317.87	734.69	702.06	32.63	22.514	
7,700.00	7,671.23	7,652.13	7,637.99	18.36	17.18	-176.92	-39.88	323.03	751.15	718.06	33.09	22.699	
7,800.00	7,770.74	7,758.17	7,743.95	18.59	17.40	-176.99	-39.88	327.24	764.97	731.43	33.54	22.805	
7,900.00	7,870.40	7,864.69	7,850.43	18.81	17.61	-177.04	-39.88	330.48	776.15	742.16	33.99	22.837	
8,000.00	7,970.19	7,971.60	7,957.31	19.02	17.82	-177.08	-39.88	332.74	784.67	750.25	34.42	22.795	
8,100.00	8,070.08	8,078.78	8,064.49	19.22	18.03	-177.11	-39.88	334.00	790.52	755.67	34.85	22.685	
8,200.00	8,170.04	8,184.34	8,170.04	19.41	18.23	-177.12	-39.88	334.28	793.72	758.46	35.26	22.512	
8,300.00	8,270.03	8,284.33	8,270.03	19.59	18.44	-177.12	-39.88	334.28	794.91	759.24	35.67	22.286	
8,400.00	8,370.03	8,384.33	8,370.03	19.77	18.65	92.88	-39.88	334.28	794.94	758.86	36.08	22.031	
8,500.00	8,470.03	8,484.33	8,470.03	19.97	18.86	92.88	-39.88	334.28	794.94	758.42	36.52	21.769	
8,568.85	8,538.87	8,553.17	8,538.87	20.11	19.01	-87.64	-39.88	334.28	794.93	758.11	36.82	21.590	
8,600.00	8,570.03	8,583.81	8,569.51	20.17	19.07	-87.62	-39.93	334.28	794.94	757.99	36.95	21.513	
8,700.00	8,669.39	8,677.34	8,662.51	20.35	19.25	-87.66	-48.76	334.28	794.99	757.69	37.31	21.310	
8,800.00	8,765.49	8,771.04	8,753.01	20.52	19.42	-87.77	-72.64	334.28	795.14	757.49	37.66	21.115	
8,900.00	8,855.41	8,865.07	8,838.71	20.72	19.61	-87.93	-111.10	334.28	795.39	757.35	38.04	20.907	
9,000.00	8,936.41	8,959.59	8,917.35	20.93	19.82	-88.16	-163.34	334.28	795.74	757.23	38.51	20.662	
9,100.00	9,006.04	9,054.75	8,986.77	21.20	20.07	-88.44	-228.27	334.28	796.19	757.06	39.12	20.352	
9,200.00	9,062.18	9,150.00	9,044.55	21.55	20.41	-88.77	-303.85	334.28	796.74	756.81	39.93	19.955	
9,300.00	9,103.13	9,247.56	9,089.93	22.01	20.87	-89.14	-390.08	334.28	797.39	756.41	40.98	19.457	
9,400.00	9,127.63	9,345.45	9,120.12	22.62	21.47	-89.53	-483.07	334.28	798.14	755.84	42.29	18.871	
9,500.00	9,134.97	9,444.47	9,134.12	23.36	22.20	-89.94	-580.98	334.28	798.96	755.11	43.85	18.221	
9,600.00	9,134.60	9,544.44	9,134.76	24.22	23.06	-90.01	-680.92	334.28	799.83	754.19	45.63	17.527	
9,700.00	9,134.22	9,644.43	9,134.38	25.18	24.02	-90.01	-780.92	334.28	800.69	753.07	47.62	16.814	
9,800.00	9,133.84	9,744.43	9,134.00	26.24	25.07	-90.01	-880.92	334.28	801.56	751.76	49.79	16.097	
9,900.00	9,133.47	9,844.43	9,133.62	27.38	26.21	-90.01	-980.91	334.28	802.42	750.29	52.13	15.391	
10,000.00	9,133.09	9,944.42	9,133.24	28.59	27.42	-90.01	-1,080.91	334.28	803.29	748.67	54.62	14.707	
10,100.00	9,132.72	10,044.42	9,132.86	29.86	28.70	-90.01	-1,180.90	334.28	804.15	746.92	57.23	14.052	
10,200.00	9,132.34	10,144.42	9,132.49	31.19	30.04	-90.01	-1,280.90	334.27	805.01	745.07	59.95	13.429	
10,300.00	9,131.96	10,244.41	9,132.11	32.57	31.42	-90.01	-1,380.89	334.27	805.88	743.12	62.76	12.841	
10,400.00	9,131.59	10,344.41	9,131.73	33.99	32.85	-90.01	-1,480.89	334.27	806.74	741.09	65.65	12.288	
10,500.00	9,131.21	10,444.40	9,131.35	35.44	34.31	-90.01	-1,580.88	334.27	807.61	738.99	68.62	11.769	
10,600.00	9,130.83	10,544.40	9,130.97	36.93	35.81	-90.01	-1,680.88	334.27	808.47	736.82	71.65	11.283	
10,700.00	9,130.46	10,644.40	9,130.59	38.45	37.34	-90.01	-1,780.88	334.27	809.34	734.60	74.74	10.829	
10,800.00	9,130.08	10,744.39	9,130.22	39.99	38.89	-90.01	-1,880.87	334.27	810.20	732.33	77.88	10.404	
10,900.00	9,129.70	10,844.39	9,129.84	41.56	40.47	-90.01	-1,980.87	334.27	811.07	730.01	81.05	10.007	
11,000.00	9,129.33	10,944.39	9,129.46	43.15	42.07	-90.01	-2,080.86	334.27	811.93	727.66	84.27	9.635	
11,100.00	9,128.95	11,044.38	9,129.08	44.75	43.68	-90.01	-2,180.86	334.27	812.80	725.28	87.52	9.287	
11,200.00	9,128.57	11,144.38	9,128.70	46.37	45.31	-90.01	-2,280.85	334.27	813.66	722.86	90.80	8.961	
11,300.00	9,128.20	11,244.37	9,128.32	48.01	46.96	-90.01	-2,380.85	334.27	814.53	720.41	94.11	8.655	
11,400.00	9,127.82	11,344.37	9,127.95	49.66	48.61	-90.01	-2,480.84	334.27	815.39	717.95	97.44	8.368	
11,500.00	9,127.45	11,444.37	9,127.57	51.32	50.28	-90.01	-2,580.84	334.27	816.26	715.46	100.80	8.098	
11,600.00	9,127.07	11,544.36	9,127.19	52.99	51.96	-90.01	-2,680.84	334.26	817.12	712.95	104.17	7.844	
11,700.00	9,126.69	11,644.36	9,126.81	54.67	53.65	-90.01	-2,780.83	334.26	817.98	710.42	107.57	7.604	
11,800.00	9,126.32	11,744.36	9,126.43	56.36	55.35	-90.01	-2,880.83	334.26	818.85	707.87	110.98	7.379	
11,900.00	9,125.94	11,844.35	9,126.05	58.06	57.06	-90.01	-2,980.82	334.26	819.71	705.31	114.40	7.165	
12,000.00	9,125.56	11,944.35	9,125.68	59.76	58.77	-90.01	-3,080.82	334.26	820.58	702.74	117.84	6.964	
12,100.00	9,125.19	12,044.34	9,125.30	61.47	60.49	-90.01	-3,180.81	334.26	821.44	700.16	121.29	6.773	
12,200.00	9,124.81	12,144.34	9,124.92	63.19	62.22	-90.01	-3,280.81	334.26	822.31	697.56	124.75	6.592	
12,300.00	9,124.43	12,244.34	9,124.54	64.92	63.95	-90.01	-3,380.80	334.26	823.17	694.95	128.22	6.420	
12,400.00	9,124.06	12,344.33	9,124.16	66.65	65.69	-90.01	-3,480.80	334.26	824.04	692.33	131.70	6.257	
12,500.00	9,123.68	12,444.33	9,123.78	68.38	67.43	-90.01	-3,580.80	334.26	824.90	689.71	135.19	6.102	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
Project: Eddy County, NM (NAD-83)
Reference Site: Tomb Raider 1-12 Fed
Site Error: 0.00 usft
Reference Well: 522H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 522H
TVD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
MD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Tomb Raider 1-12 Fed - 523H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,600.00	9,123.30	12,544.33	9,123.41	70.12	69.17	-90.01	-3,680.79	334.26	825.77	687.07	138.69	5.954		
12,700.00	9,122.93	12,644.32	9,123.03	71.86	70.92	-90.01	-3,780.79	334.26	826.63	684.43	142.20	5.813		
12,800.00	9,122.55	12,744.32	9,122.65	73.61	72.68	-90.00	-3,880.78	334.26	827.50	681.78	145.71	5.679		
12,900.00	9,122.18	12,844.31	9,122.27	75.36	74.44	-90.00	-3,980.78	334.26	828.36	679.13	149.23	5.551		
13,000.00	9,121.80	12,944.31	9,121.89	77.11	76.20	-90.00	-4,080.77	334.25	829.23	676.47	152.76	5.428		
13,100.00	9,121.42	13,044.31	9,121.51	78.87	77.96	-90.00	-4,180.77	334.25	830.09	673.80	156.29	5.311		
13,200.00	9,121.05	13,144.30	9,121.14	80.63	79.73	-90.00	-4,280.76	334.25	830.95	671.13	159.83	5.199		
13,300.00	9,120.67	13,244.30	9,120.76	82.39	81.50	-90.00	-4,380.76	334.25	831.82	668.45	163.37	5.092		
13,400.00	9,120.29	13,344.30	9,120.38	84.16	83.27	-90.00	-4,480.76	334.25	832.68	665.77	166.92	4.989		
13,500.00	9,119.92	13,444.29	9,120.00	85.93	85.04	-90.00	-4,580.75	334.25	833.55	663.08	170.47	4.890		
13,600.00	9,119.54	13,544.29	9,119.62	87.70	86.82	-90.00	-4,680.75	334.25	834.41	660.39	174.03	4.795		
13,700.00	9,119.16	13,644.28	9,119.24	89.47	88.60	-90.00	-4,780.74	334.25	835.28	657.69	177.58	4.704		
13,800.00	9,118.79	13,744.28	9,118.87	91.25	90.38	-90.00	-4,880.74	334.25	836.14	654.99	181.15	4.616		
13,900.00	9,118.41	13,844.28	9,118.49	93.02	92.16	-90.00	-4,980.73	334.25	837.01	652.29	184.71	4.531		
14,000.00	9,118.03	13,944.27	9,118.11	94.80	93.94	-90.00	-5,080.73	334.25	837.87	649.59	188.28	4.450		
14,100.00	9,117.66	14,044.27	9,117.73	96.58	95.73	-90.00	-5,180.72	334.25	838.74	646.88	191.86	4.372		
14,200.00	9,117.28	14,144.27	9,117.35	98.36	97.51	-90.00	-5,280.72	334.25	839.60	644.17	195.43	4.296		
14,300.00	9,116.91	14,244.26	9,116.97	100.15	99.30	-90.00	-5,380.72	334.25	840.47	641.46	199.01	4.223		
14,400.00	9,116.53	14,344.26	9,116.60	101.93	101.09	-90.00	-5,480.71	334.24	841.33	638.74	202.59	4.153		
14,500.00	9,116.15	14,444.25	9,116.22	103.72	102.88	-90.00	-5,580.71	334.24	842.20	636.02	206.17	4.085		
14,600.00	9,115.78	14,544.25	9,115.84	105.50	104.67	-90.00	-5,680.70	334.24	843.06	633.30	209.76	4.019		
14,700.00	9,115.40	14,644.25	9,115.46	107.29	106.47	-90.00	-5,780.70	334.24	843.92	630.58	213.35	3.956		
14,800.00	9,115.02	14,744.24	9,115.08	109.08	108.26	-90.00	-5,880.69	334.24	844.79	627.85	216.94	3.894		
14,900.00	9,114.65	14,844.24	9,114.71	110.87	110.06	-90.00	-5,980.69	334.24	845.65	625.12	220.53	3.835		
15,000.00	9,114.27	14,944.24	9,114.33	112.66	111.85	-90.00	-6,080.68	334.24	846.52	622.39	224.12	3.777		
15,100.00	9,113.89	15,044.23	9,113.95	114.46	113.65	-90.00	-6,180.68	334.24	847.38	619.66	227.72	3.721		
15,200.00	9,113.52	15,144.23	9,113.57	116.25	115.45	-90.00	-6,280.68	334.24	848.25	616.93	231.32	3.667		
15,300.00	9,113.14	15,244.22	9,113.19	118.05	117.25	-90.00	-6,380.67	334.24	849.11	614.20	234.92	3.615		
15,400.00	9,112.76	15,344.22	9,112.81	119.84	119.05	-90.00	-6,480.67	334.24	849.98	611.46	238.52	3.564		
15,500.00	9,112.39	15,444.22	9,112.44	121.64	120.85	-90.00	-6,580.66	334.24	850.84	608.72	242.12	3.514		
15,600.00	9,112.01	15,544.21	9,112.06	123.44	122.65	-90.00	-6,680.66	334.24	851.71	605.98	245.72	3.466		
15,700.00	9,111.64	15,644.21	9,111.68	125.23	124.45	-90.00	-6,780.65	334.24	852.57	603.24	249.33	3.419		
15,800.00	9,111.26	15,744.21	9,111.30	127.03	126.26	-90.00	-6,880.65	334.23	853.44	600.50	252.93	3.374		
15,900.00	9,110.88	15,844.20	9,110.92	128.83	128.06	-90.00	-6,980.64	334.23	854.30	597.76	256.54	3.330		
16,000.00	9,110.51	15,944.20	9,110.54	130.63	129.86	-90.00	-7,080.64	334.23	855.17	595.02	260.15	3.287		
16,100.00	9,110.13	16,044.19	9,110.17	132.43	131.67	-90.00	-7,180.64	334.23	856.03	592.27	263.76	3.245		
16,200.00	9,109.75	16,144.19	9,109.79	134.23	133.48	-90.00	-7,280.63	334.23	856.89	589.52	267.37	3.205		
16,300.00	9,109.38	16,244.19	9,109.41	136.04	135.28	-90.00	-7,380.63	334.23	857.76	586.78	270.98	3.165		
16,400.00	9,109.00	16,344.18	9,109.03	137.84	137.09	-90.00	-7,480.62	334.23	858.62	584.03	274.60	3.127		
16,500.00	9,108.62	16,444.18	9,108.65	139.64	138.89	-90.00	-7,580.62	334.23	859.49	581.28	278.21	3.089		
16,600.00	9,108.25	16,544.18	9,108.27	141.45	140.70	-90.00	-7,680.61	334.23	860.35	578.53	281.82	3.053		
16,700.00	9,107.87	16,644.17	9,107.90	143.25	142.51	-90.00	-7,780.61	334.23	861.22	575.78	285.44	3.017		
16,800.00	9,107.50	16,744.17	9,107.52	145.06	144.32	-90.00	-7,880.60	334.23	862.08	573.03	289.06	2.982		
16,900.00	9,107.12	16,844.16	9,107.14	146.86	146.13	-90.00	-7,980.60	334.23	862.95	570.27	292.67	2.948		
17,000.00	9,106.74	16,944.16	9,106.76	148.67	147.94	-90.00	-8,080.60	334.23	863.81	567.52	296.29	2.915		
17,100.00	9,106.37	17,044.16	9,106.38	150.47	149.75	-90.00	-8,180.59	334.22	864.68	564.76	299.91	2.883		
17,200.00	9,105.99	17,144.15	9,106.00	152.28	151.56	-90.00	-8,280.59	334.22	865.54	562.01	303.53	2.852		
17,300.00	9,105.61	17,244.15	9,105.63	154.09	153.37	-90.00	-8,380.58	334.22	866.41	559.25	307.15	2.821		
17,400.00	9,105.24	17,344.15	9,105.25	155.89	155.18	-90.00	-8,480.58	334.22	867.27	556.50	310.77	2.791		
17,500.00	9,104.86	17,444.14	9,104.87	157.70	156.99	-90.00	-8,580.57	334.22	868.14	553.74	314.40	2.761		
17,600.00	9,104.48	17,544.14	9,104.49	159.51	158.80	-90.00	-8,680.57	334.22	869.00	550.98	318.02	2.733		
17,700.00	9,104.11	17,644.13	9,104.11	161.32	160.62	-90.00	-8,780.56	334.22	869.86	548.22	321.64	2.704		

CC - Min centre to center distance or convergent point. SF - min separation factor. ES - min ellipse separation

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
Project: Eddy County, NM (NAD-83)
Reference Site: Tomb Raider 1-12 Fed
Site Error: 0.00 usft
Reference Well: 522H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 522H
TVD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
MD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Tomb Raider 1-12 Fed - 523H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
17,800.00	9,103.73	17,744.13	9,103.73	163.13	162.43	-90.00	-8,880.56	334.22	870.73	545.46	325.27	2.677	
17,900.00	9,103.35	17,844.13	9,103.36	164.94	164.24	-90.00	-8,980.56	334.22	871.59	542.70	328.89	2.650	
18,000.00	9,102.98	17,944.12	9,102.98	166.75	166.05	-90.00	-9,080.55	334.22	872.46	539.94	332.52	2.624	
18,100.00	9,102.60	18,044.12	9,102.60	168.56	167.87	-90.00	-9,180.55	334.22	873.32	537.18	336.14	2.598	
18,200.00	9,102.23	18,144.12	9,102.22	170.37	169.68	-90.00	-9,280.54	334.22	874.19	534.42	339.77	2.573	
18,300.00	9,101.85	18,244.11	9,101.84	172.18	171.49	-90.00	-9,380.54	334.22	875.05	531.66	343.39	2.548	
18,400.00	9,101.47	18,344.11	9,101.46	173.99	173.31	-90.00	-9,480.53	334.22	875.92	528.90	347.02	2.524	
18,500.00	9,101.10	18,444.10	9,101.09	175.80	175.12	-90.00	-9,580.53	334.21	876.78	526.13	350.65	2.500	
18,600.00	9,100.72	18,544.10	9,100.71	177.61	176.94	-90.00	-9,680.52	334.21	877.65	523.37	354.28	2.477	
18,700.00	9,100.34	18,644.10	9,100.33	179.42	178.75	-90.00	-9,780.52	334.21	878.51	520.61	357.91	2.455	
18,800.00	9,099.97	18,744.09	9,099.95	181.23	180.57	-90.00	-9,880.52	334.21	879.38	517.84	361.53	2.432	
18,870.81	9,099.70	18,810.38	9,099.70	182.29	181.74	-90.00	-9,946.80	334.21	880.00	516.25	363.75	2.419 SF	

LEAM Drilling Systems LLC

Anticollision Report

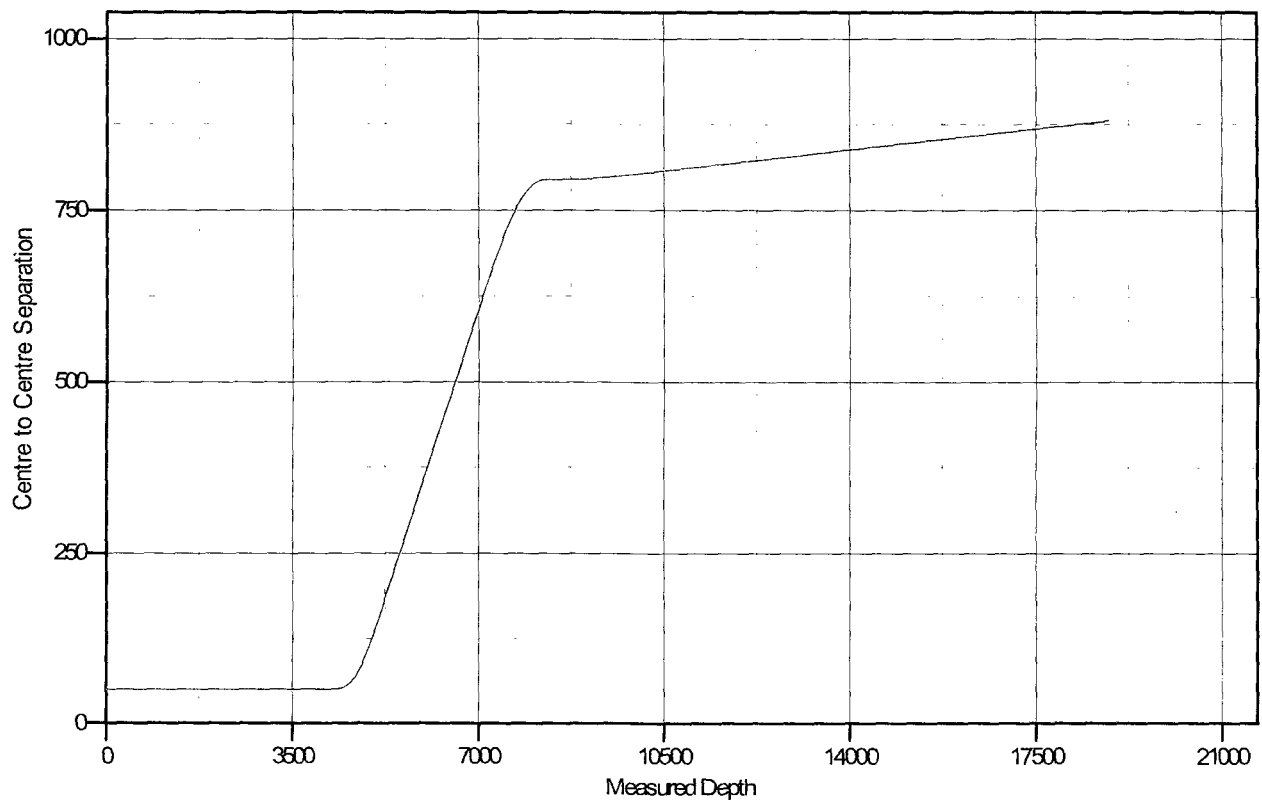
Company: DEVON ENERGY
Project: Eddy County, NM (NAD-83)
Reference Site: Tomb Raider 1-12 Fed
Site Error: 0.00 usft
Reference Well: 522H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 522H
TVD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
MD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to 3467.2' GE + 23.5' KB @ 3490.70usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 522H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.32°

Ladder Plot



LEGEND

—●— 523H, OH, Plan #1 V0

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
Project: Eddy County, NM (NAD-83)
Reference Site: Tomb Raider 1-12 Fed
Site Error: 0.00 usft
Reference Well: 522H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 522H
TVD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
MD Reference: 3467.2' GE + 23.5' KB @ 3490.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to 3467.2' GE + 23.5' KB @ 3490.70usft

Offset Depths are relative to Offset Datum

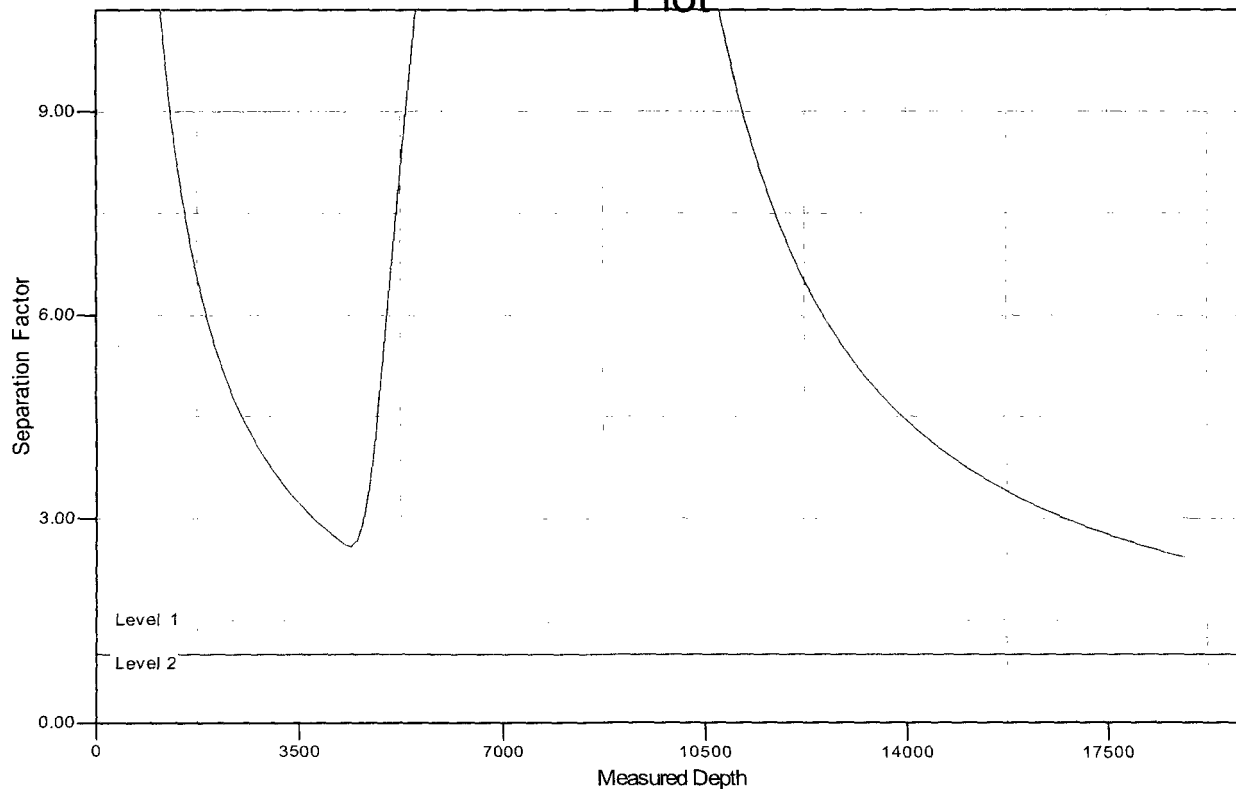
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 522H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.32°

Separation Factor Plot



LEGEND

—●— 523H, OH, Plan #1 V0

A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

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

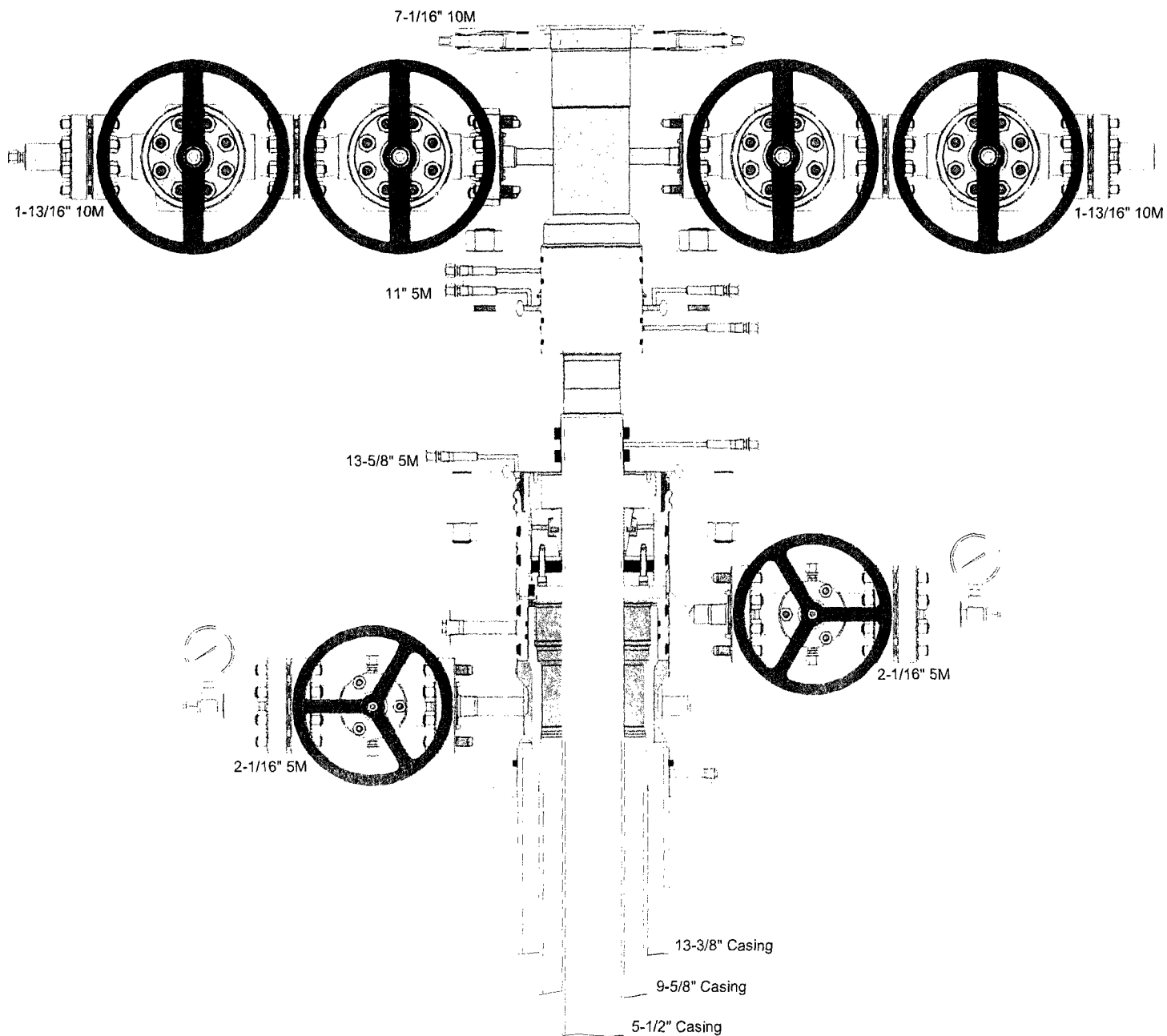
- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.

After running the 9-5/8" intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.





Commitment Runs Deep



I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

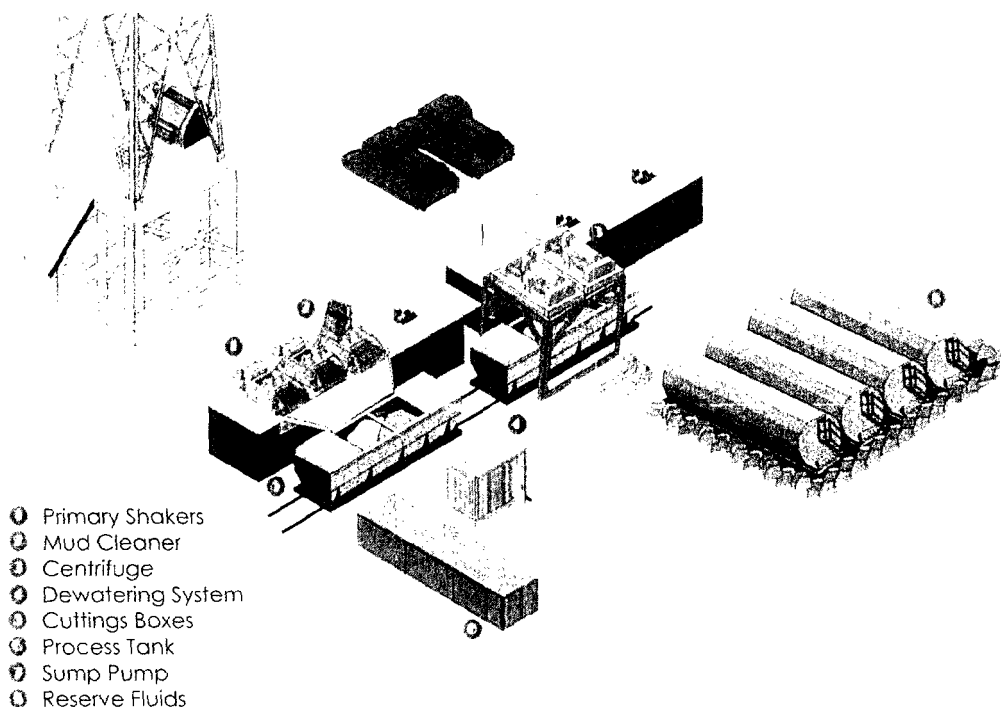
II. Operations and Maintenance Plan

Primary Shakers: The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

Mud Cleaner: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



Closed Loop Schematic



Mi SWACO

Centrifuges: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

Dewatering System: The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

Cuttings Boxes: Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

Process Tank: (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

Reserve Fluids (Tank Farm): A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

Contingency Production Cement					
Additional Info for String		3		Additional String Description	
Stage Tool Depth		4300			
<i>Lead</i>					
Top MD of Segment		4100		Btm MD of Segment	
				4200	
				Cement Type	
				C	
Additives		Quantity (sks)		Yield (cu.ft./sk)	
Enhancer 923 + 10% BWOC Bentonite + 0.05% BWOC SA-1015 + 0.3% BWOC HR-800 + 0.2% BWOC FE-2 + 0.125 lb/sk Pol-E-Flake + 0.5 lb/sk D-Air 5000		20		3.31	
Density (lbs/gal)		10.9		Volume (cu.ft.)	
				66	
				Percent Excess	
				25	
<i>Tail</i>					
Top MD of Segment		4200		Top MD of Segment	
				4300	
				Cement Type	
				H	
Additives		Quantity (sks)		Yield (cu.ft./sk)	
0.125 lbs/sack Poly-E-Flake		30		1.33	
Density (lbs/gal)		14.8		Volume (cu.ft.)	
				40	
				Percent Excess	
				25	

Contingency Production Cement					
Additional Info for String		3		Additional String Description	
Stage Tool Depth		4300			
<i>Lead</i>					
Top MD of Segment		4300		Btm MD of Segment	
				9050	
				Cement Type	
				C	
Additives		Quantity (sks)		Yield (cu.ft./sk)	
Enhancer 923 + 10% BWOC Bentonite + 0.05% BWOC SA-1015 + 0.3% BWOC HR-800 + 0.2% BWOC FE-2 + 0.125 lb/sk Pol-E-Flake + 0.5 lb/sk D-Air 5000		565		3.31	
Density (lbs/gal)		10.9		Volume (cu.ft.)	
				1860	
				Percent Excess	
				25	
<i>Tail</i>					
Top MD of Segment		9050		Top MD of Segment	
				18871	
				Cement Type	
				H	
Additives		Quantity (sks)		Yield (cu.ft./sk)	
Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite		2585		1.2	
Density (lbs/gal)		14.5		Volume (cu.ft.)	
				3100	
				Percent Excess	
				25	



Fluid Technology

ContiTech Beattie Corp.
Website: www.contitechbeattie.com

Monday, June 14, 2010

RE: Drilling & Production Hoses
Lifting & Safety Equipment

To Helmerich & Payne,

A Continental Contitech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly. It is good practice to use lifting & safety equipment but not mandatory.

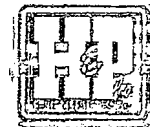
Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

Robin Hodgson
Sales Manager
ContiTech Beattie Corp

ContiTech Beattie Corp,
11535 Brittmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com



R16 212



QUALITY DOCUMENT

PHOENIX RUBBER
INDUSTRIAL LTD.

* 6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152
Phone: (3662) 566-737 • Fax: (3662) 566-738

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44. Hungary • H-1440 Budapest, P. O. Box 26
Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.taurusemerge.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 552	
PURCHASER: Phoenix Beattie Co.				P.O. N°: 1519FA-871	
PHOENIX RUBBER order N°: 170466		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 34128		NOMINAL / ACTUAL LENGTH: 11,43 m			
W.P. 68,96 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature					
See attachment. (1 page)					
↑ 10 mm = 10 Min. → 10 mm = 25 MPa					
COUPLINGS					
Type	Serial N°		Quality	Heat N°	
3" coupling with 4 1/16" Flange end	720 719		AISI 4130	C7626	
			AISI 4130	47357	
API Spec 16 C Temperature rate: "B"					
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
Date:	Inspector		Quality Control		
29. April. 2002.			PHOENIX RUBBER Industrial Ltd. Hose Inspection and Pressure Testing PHOENIX RUBBER Q.C.		

40920-0-00015 NB00C 14094-65

8	GNL +0.000 PC	14.00		
	RDL +0.000 PC	14.00		
	BL 11311.58	14.00		
7	GNL +0.000 PC	13.40	40	60
	RDL +0.000 PC	13.40		
	BL 11347.58	13.40		
6	GNL +0.000 PC	13.20		
	RDL +0.000 PC	13.20		
	BL 11350.58	13.20		
5	GNL +0.000 PC	13.00		
	RDL +0.000 PC	13.00		
	BL 11355.58	13.00		
4				
3				
2				

[Signature]
PHOENIX RUBBER
 Industrial Ltd.
 Hose Inspection and
 Certification Dept.

VERIFIED TRUE CO.
 PHOENIX RUBBER CO.

APD ID: 10400007997

Submission Date: 12/09/2016

Highlighted data
reflects the most
recent changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

[Show Final Text](#)
Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

TR 1-12 FED 522H_Ex Access Rd_12-07-2016.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? YES

ROW ID(s)

ID: NM-131858

Do the existing roads need to be improved? NO

Existing Road Improvement Description:
Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

TR 1-12 Fed 522H_Acc Rd_12-07-2016.pdf

New road type: COLLECTOR,RESOURCE

Length: 597

Feet

Width (ft.): 30

Max slope (%): 2

Max grade (%): 2

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):
New road travel width: 30

New road access erosion control: water drainage ditch

New road access plan or profile prepared? NO

New road access plan attachment:
Access road engineering design? NO

Access road engineering design attachment:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

Access surfacing type: GRAVEL

Access topsoil source: BOTH

Access surfacing type description:

Access onsite topsoil source depth: 24

Offsite topsoil source description: na

Onsite topsoil removal process: See attached Interim reclamation diagram.

Access other construction information:

Access miscellaneous information:

Number of access turnouts:

Access turnout map:

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: na

Road Drainage Control Structures (DCS) description: na

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

TR 1-2 Fed 522H_1 Mile Map_12-07-2016.pdf

Existing Wells description:

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

Submit or defer a Proposed Production Facilities plan? DEFER

Estimated Production Facilities description: All lines will be buried going to the Todd-Apache 1-1 CTB.

Section 5 - Location and Types of Water Supply

Water Source Table

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

Water source use type: STIMULATION

Water source type: RECYCLED

Describe type:

Source latitude:

Source longitude:

Source datum:

Water source permit type: OTHER

Source land ownership: FEDERAL

Water source transport method: PIPELINE,TRUCKING

Source transportation land ownership: FEDERAL

Water source volume (barrels): 170000

Source volume (acre-feet): 21.911827

Source volume (gal): 7140000

Water source and transportation map:

TR_1-12_Fed 522H_WTR_TRSF_MP_12-07-2016.pdf

Water source comments: The attached Water Transfer Map is a proposal only and the final route and documentation will be provided by a Devon contractor prior to installation. When available Devon will always follow existing disturbance.

New water well? NO

New Water Well Info

Well latitude:

Well Longitude:

Well datum:

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

Aquifer comments:

Aquifer documentation:

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

Drilling method:

Drill material:

Grout material:

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

Well Production type:

Completion Method:

Water well additional information:

State appropriation permit:

Additional information attachment:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

Section 6 - Construction Materials

Construction Materials description: Dirt fill and caliche will be used to construct well pad.

Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: FLOWBACK

Waste content description: Produced water during flowback operations. This amount is a daily average during flowback (BWPD).

Amount of waste: 1500 barrels

Waste disposal frequency : Daily

Safe containment description: na

Safe containmant attachment:

Waste disposal type: ON-LEASE INJECTION **Disposal location ownership:** PRIVATE

Disposal type description:

Disposal location description: Devon owned Todd disposal system. 14 total injection wells tied into one system

Waste type: PRODUCED WATER

Waste content description: Produced water during production operations. This amount is a daily average during the first year of production (BWPD).

Amount of waste: 1000 barrels

Waste disposal frequency : Daily

Safe containment description: na

Safe containmant attachment:

Waste disposal type: ON-LEASE INJECTION **Disposal location ownership:** PRIVATE

Disposal type description:

Disposal location description: Devon owned Todd disposal system. 14 total injection wells tied into one system

Waste type: COMPLETIONS/STIMULATION

Waste content description: Flow back water during completion operations.

Amount of waste: 3000 barrels

Waste disposal frequency : One Time Only

Safe containment description: na

Safe containmant attachment:

Waste disposal type: OFF-LEASE INJECTION **Disposal location ownership:** PRIVATE

Disposal type description:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

Disposal location description: Devon owned Todd disposal system. 14 total injection wells tied into one system

Waste type: DRILLING

Waste content description: Water based cutting

Amount of waste: 1850 barrels

Waste disposal frequency : Daily

Safe containment description: na

Safe containmant attachment:

Waste disposal type: ON-LEASE INJECTION **Disposal location ownership:** PRIVATE

Disposal type description:

Disposal location description: Devon owned Todd disposal system. 14 total injection wells tied into one system

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

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

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

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

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

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

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

TR_1-12_Fed 522H_Rig_Layout_12-07-2016.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: TODD- APACHE 1-1 PAD

Multiple Well Pad Number: 1

Recontouring attachment:

TR 1-12 FED 522H_Reclamation_12-07-2016.pdf

Drainage/Erosion control construction: All areas disturbed shall be reclaimed as early and as nearly as practicable to their original condition or their final land use and shall be maintained to control dust and minimize erosion to the extent practicable.

Drainage/Erosion control reclamation: Topsoils and subsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns. The disturbed area then shall be reseeded in the first favorable growing season.

Wellpad long term disturbance (acres): 3.735

Wellpad short term disturbance (acres): 3.735

Access road long term disturbance (acres): 0.8155

Access road short term disturbance (acres): 0.8155

Pipeline long term disturbance (acres): 0

Pipeline short term disturbance (acres): 0

Other long term disturbance (acres): 0

Other short term disturbance (acres): 0

Total long term disturbance: 4.5505

Total short term disturbance: 4.5505

Reconstruction method: Operator will use Best Management Practices"BMP" to mechanically recontour to obtain the desired outcome.

Topsoil redistribution: Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.

Soil treatment: Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.

Existing Vegetation at the well pad:

Existing Vegetation at the well pad attachment:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

Existing Vegetation Community at the road:

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline:

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances:

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

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

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

First Name: Mark

Last Name: Smith

Phone: (575)746-5559

Email: mark.smith@dvn.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: Maintain weeds on an as need basis.

Weed treatment plan attachment:

Monitoring plan description: Monitor as need.

Monitoring plan attachment:

Success standards: na

Pit closure description: na

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: TOMB RAIDER 1-12 FED

Well Number: 522H

Disturbance type: PIPELINE

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Section 12 - Other Information

Right of Way needed? NO

Use APD as ROW?

ROW Type(s):

ROW Applications

SUPO Additional Information: Elec Surveys, flowline survey, CTB

Use a previously conducted onsite? NO

Previous Onsite information:

Other SUPO Attachment

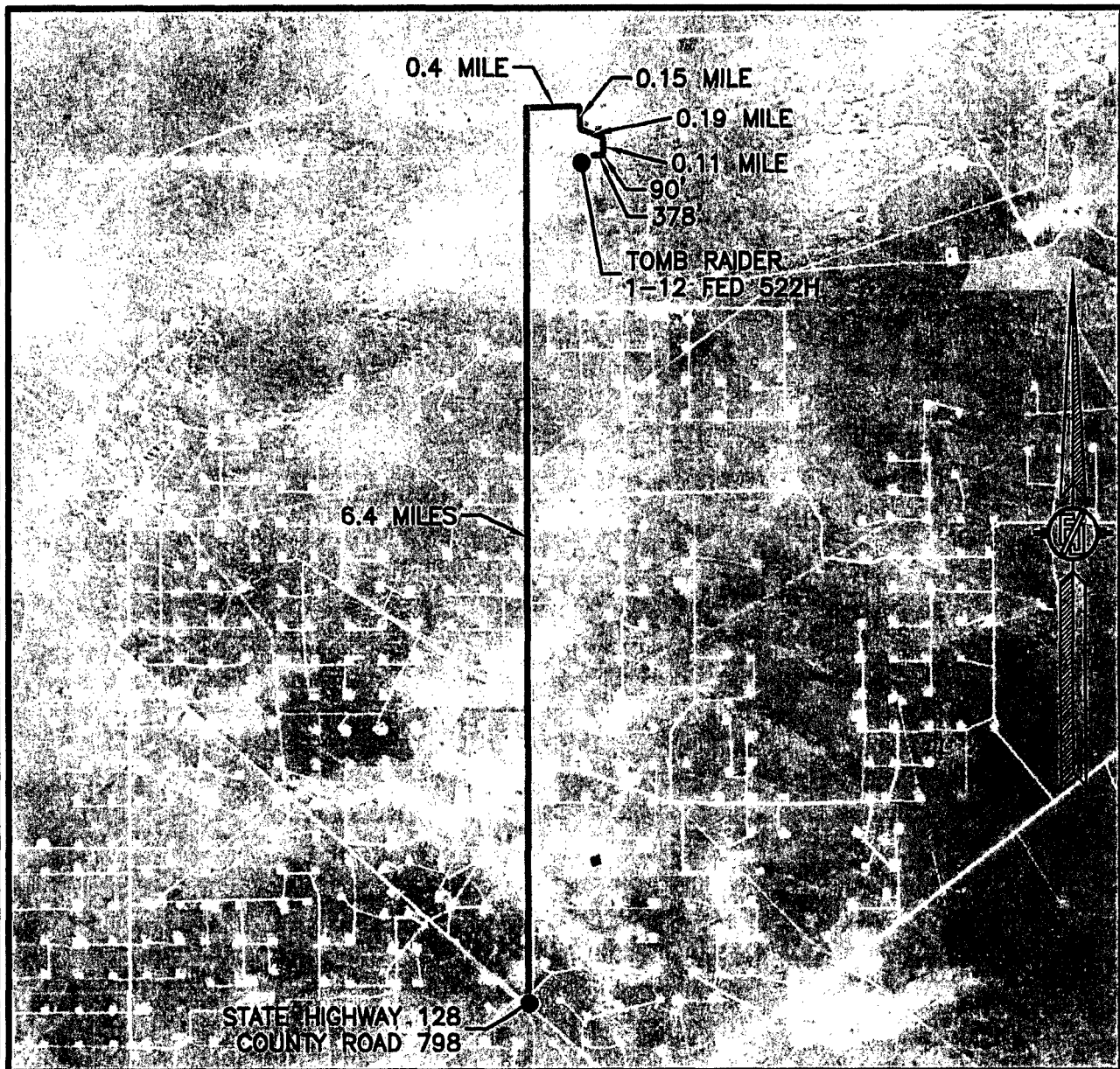
TR 1-12 Fed 522H_CTB_1_BATTERY_ELECTRIC_P_12-07-2016.PDF

TR 1-12 Fed 522H_1-1_PAD_1_PAD_ELECTRIC_P_12-07-2016.PDF

TR 1-12 Fed 522H_Flow Line_12-07-2016.pdf

TR 1-12 Fed 522H_CTB_12-07-2016.pdf

SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
FEB. 2014

DEVON ENERGY PRODUCTION COMPANY, L.P.
TOMB RAIDER 1-12 FED 522H
LOCATED 360 FT. FROM THE NORTH LINE
AND 1929 FT. FROM THE WEST LINE OF
SECTION 1, TOWNSHIP 23 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

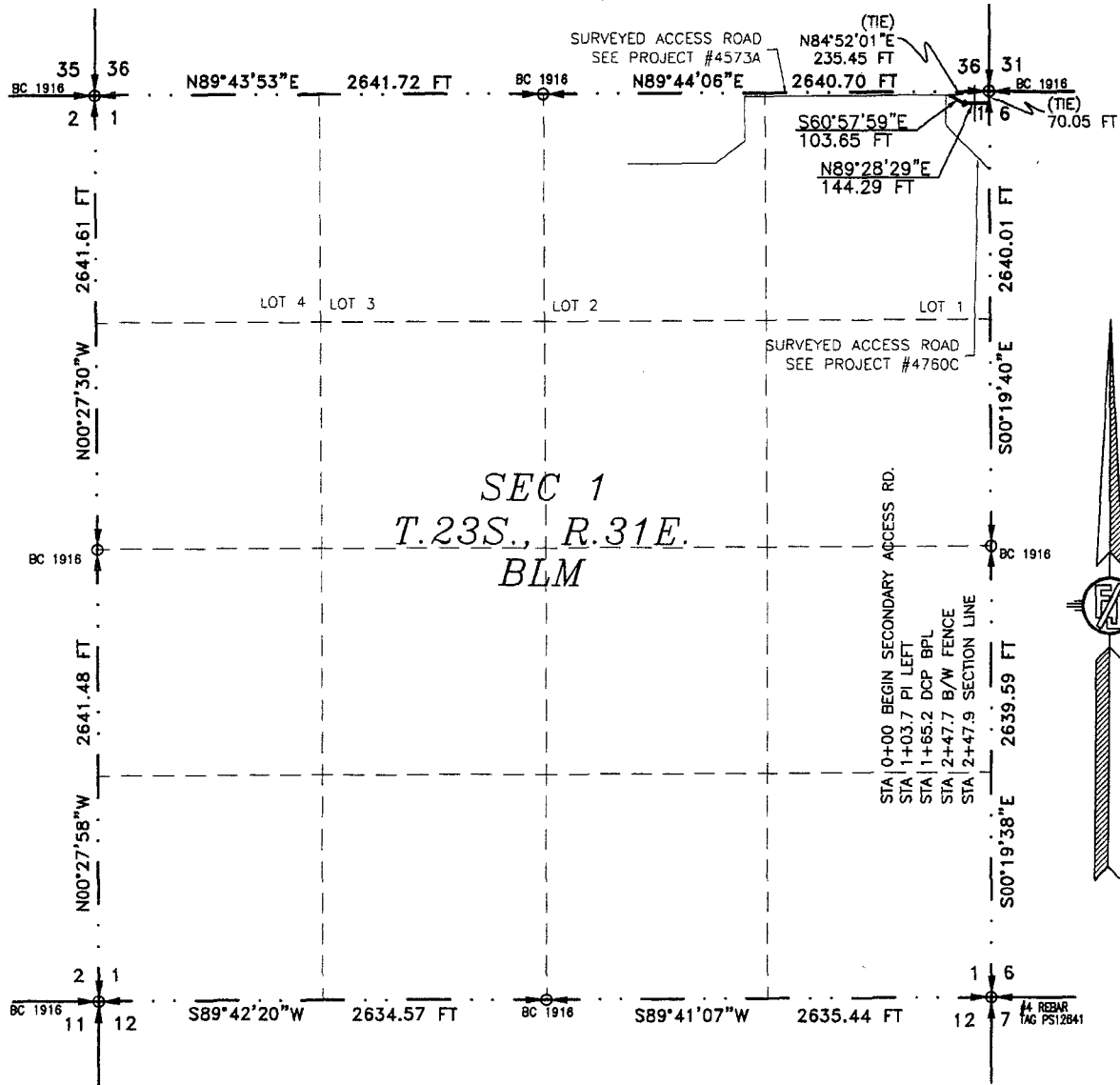
NOVEMBER 9, 2016

SURVEY NO. 5051A

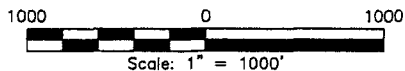
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT (AA000055105)
SECONDARY ACCESS ROAD TO TODD-APACHE 6-6 PAD 1

DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SEPTEMBER 12, 2016



SEE NEXT SHEET (2-6) FOR DESCRIPTION



GENERAL NOTES

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE, AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 12 DAY OF SEPTEMBER 2016

[Signature]
FILIMON F. JARAMILLO, PLS 12797

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SHEET: 1-6

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

SURVEY NO. 4541B

ACCESS ROAD PLAT (AA000055105)
SECONDARY ACCESS ROAD TO TODD-APACHE 6-6 PAD 1

DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SEPTEMBER 12, 2016

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN LOT 1 OF SAID SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHEAST CORNER OF SAID SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N84°52'01"E, A DISTANCE OF 235.45 FEET; THENCE S60°57'59"E A DISTANCE OF 103.65 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N89°28'29"E A DISTANCE OF 144.29 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHEAST CORNER OF SAID SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N00°19'40"W, A DISTANCE OF 70.05 FEET;

SAID STRIP OF LAND BEING 247.94 FEET OR 15.03 RODS IN LENGTH, CONTAINING 0.171 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

LOT 1 247.94 L.F. 15.03 RODS 0.171 ACRES

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,
NEW MEXICO, THIS 12 DAY OF SEPTEMBER 2016

GENERAL NOTES

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

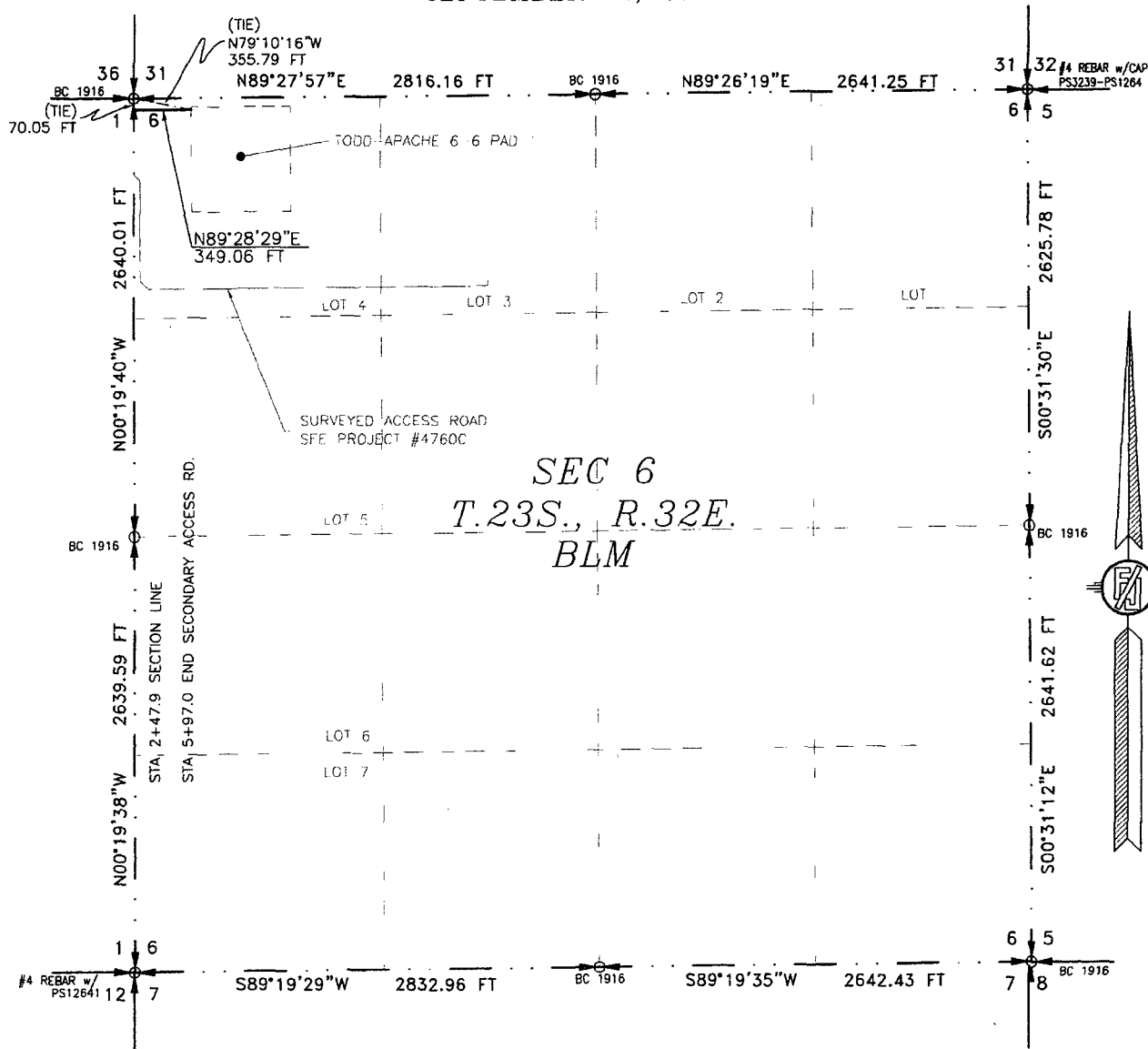
SHEET: 2-6

MADRON SURVEYING, INC. (575) 234-3341 CARLSBAD, NEW MEXICO

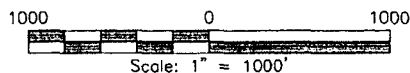
SURVEY NO. 4541B

ACCESS ROAD PLAT (AA000055105)
 SECONDARY ACCESS ROAD TO TODD-APACHE 6-6 PAD 1

DEVON ENERGY PRODUCTION COMPANY, L.P.
 CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
 SECTION 6, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M.
 LEA COUNTY, STATE OF NEW MEXICO
 SEPTEMBER 12, 2016



SEE NEXT SHEET (4-6) FOR DESCRIPTION



GENERAL NOTES

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,

NEW MEXICO, THIS 12 DAY OF SEPTEMBER 2016

[Signature]
 FILMON F. JARAMILLO, PLS. 12797

MADRON SURVEYING, INC
 301 SOUTH CANAL
 CARLSBAD, NEW MEXICO 88220
 Phone (575) 234-3341

SHEET: 3-6

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

SURVEY NO. 4541B

ACCESS ROAD PLAT (AA000055105)
SECONDARY ACCESS ROAD TO TODD-APACHE 6-6 PAD 1

DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 6, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
SEPTEMBER 12, 2016

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 6, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN LOT 4 OF SAID SECTION 6, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 6, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N00°19'40"W, A DISTANCE OF 70.05 FEET; THENCE N89°28'29"E A DISTANCE OF 349.06 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 6, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N79°10'16"W, A DISTANCE OF 355.79 FEET;

SAID STRIP OF LAND BEING 349.06 FEET OR 21.16 RODS IN LENGTH, CONTAINING 0.240 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

LOT 4 349.06 L.F. 21.16 RODS 0.240 ACRES

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD,
NEW MEXICO, THIS 12TH DAY OF SEPTEMBER 2016

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

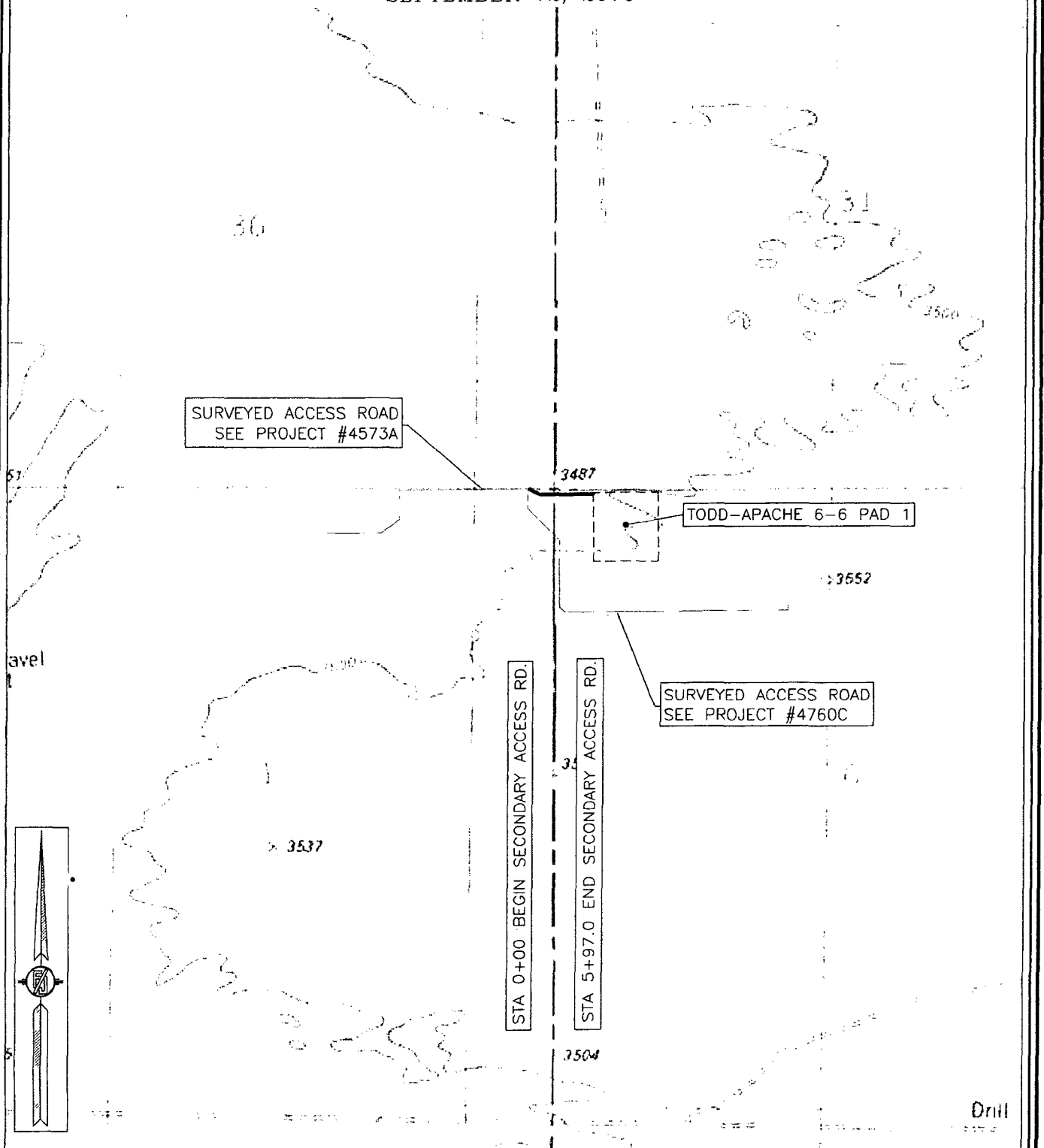
SHEET: 4-6

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

FILIMON F. JARAMILLO, P.E.S. 12797
MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 86220
Phone (575) 234-3341
SURVEY NO. 4541B

ACCESS ROAD PLAT (AA000055105)
SECONDARY ACCESS ROAD TO TODD-APACHE 6-6 PAD 1

DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
SECTION 6, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M.
EDDY & LEA COUNTY, STATE OF NEW MEXICO
SEPTEMBER 12, 2016



SHEET: 5-6

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-2341 CARLSBAD, NEW MEXICO

SURVEY NO. 4541B

ACCESS ROAD PLAT (AA000055105)
SECONDARY ACCESS ROAD TO TODD-APACHE 6-6 PAD 1

DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
SECTION 6, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M.
EDDY & LEA COUNTY, STATE OF NEW MEXICO
SEPTEMBER 12, 2016

SURVEYED ACCESS ROAD
SEE PROJECT #4573A

TODD-APACHE 6-6 PAD 1

SURVEYED ACCESS ROAD
SEE PROJECT #4760C

STA 0+00 BEGIN SECONDARY ACCESS RD.

STA 5+97.0 END SECONDARY ACCESS RD.



Niles Ranch Rd 797

SHEET: 6-6

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

SURVEY NO. 4541B



Todd - Apache MDP Pad

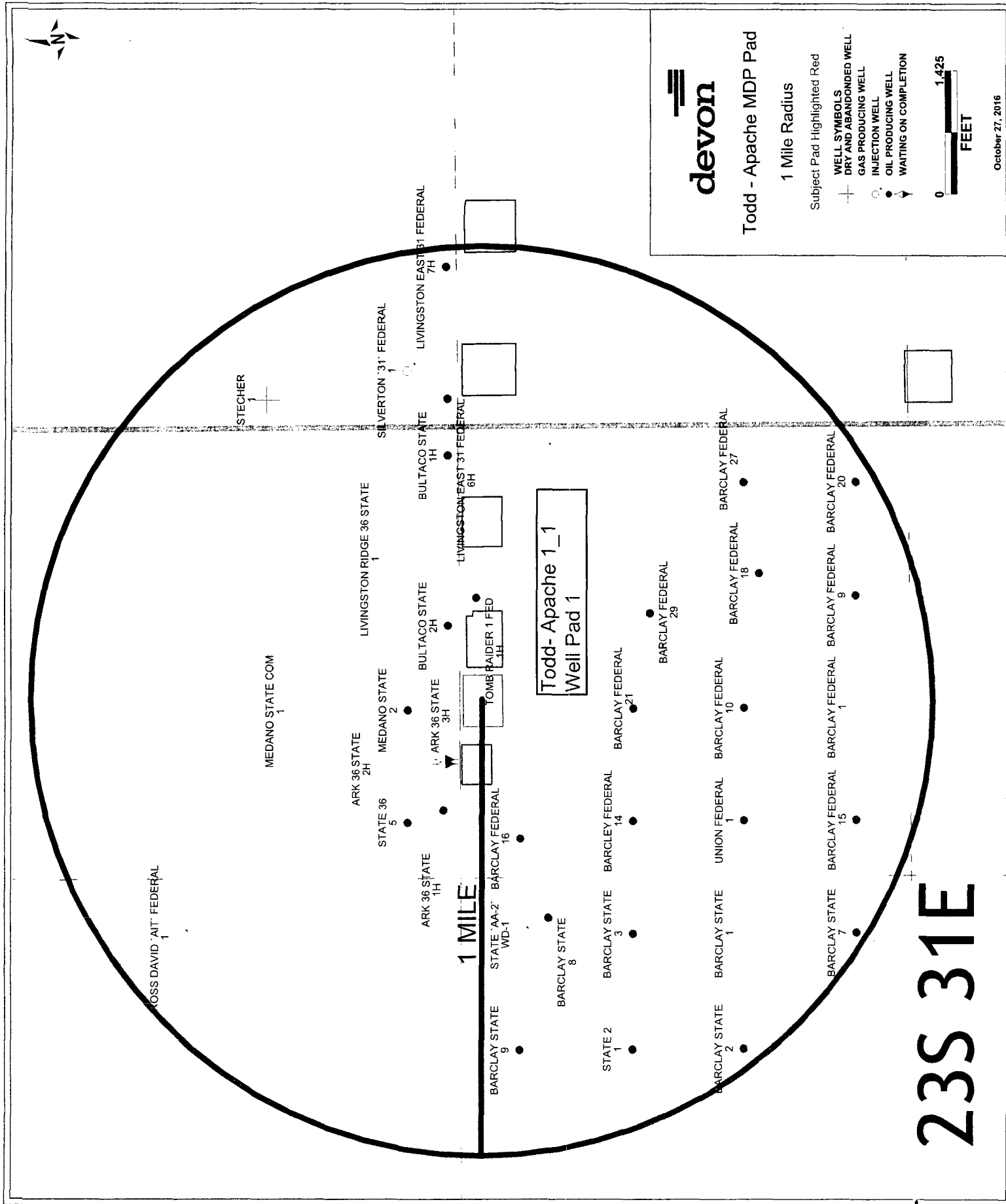
1 Mile Radius

Subject Pad Highlighted Red

- WELL SYMBOLS
- DRY AND ABANDONED WELL
 - GAS PRODUCING WELL
 - INJECTION WELL
 - OIL PRODUCING WELL
 - WAITING ON COMPLETION



October 27, 2016



23S 31E

TOMB RAIDER 1-12 FED 522H & 523H

-Duration: 30 days. Install 10 days prior to completion. Devon will contact you for additional time if needed.

This map is for illustrative purposes only and is neither a legally recorded map nor survey and is not intended to be used as one. Devon makes no warranty, expressed or implied, as to the accuracy of any information contained herein or any liability resulting from its use.



WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: _User
Map is current as of: 30-Nov-2016



0 0.07 0.14 0.28 1:14,228
Miles

1,007.59 ft

3,825.63 ft

1,822.80 ft

1,002.91 ft

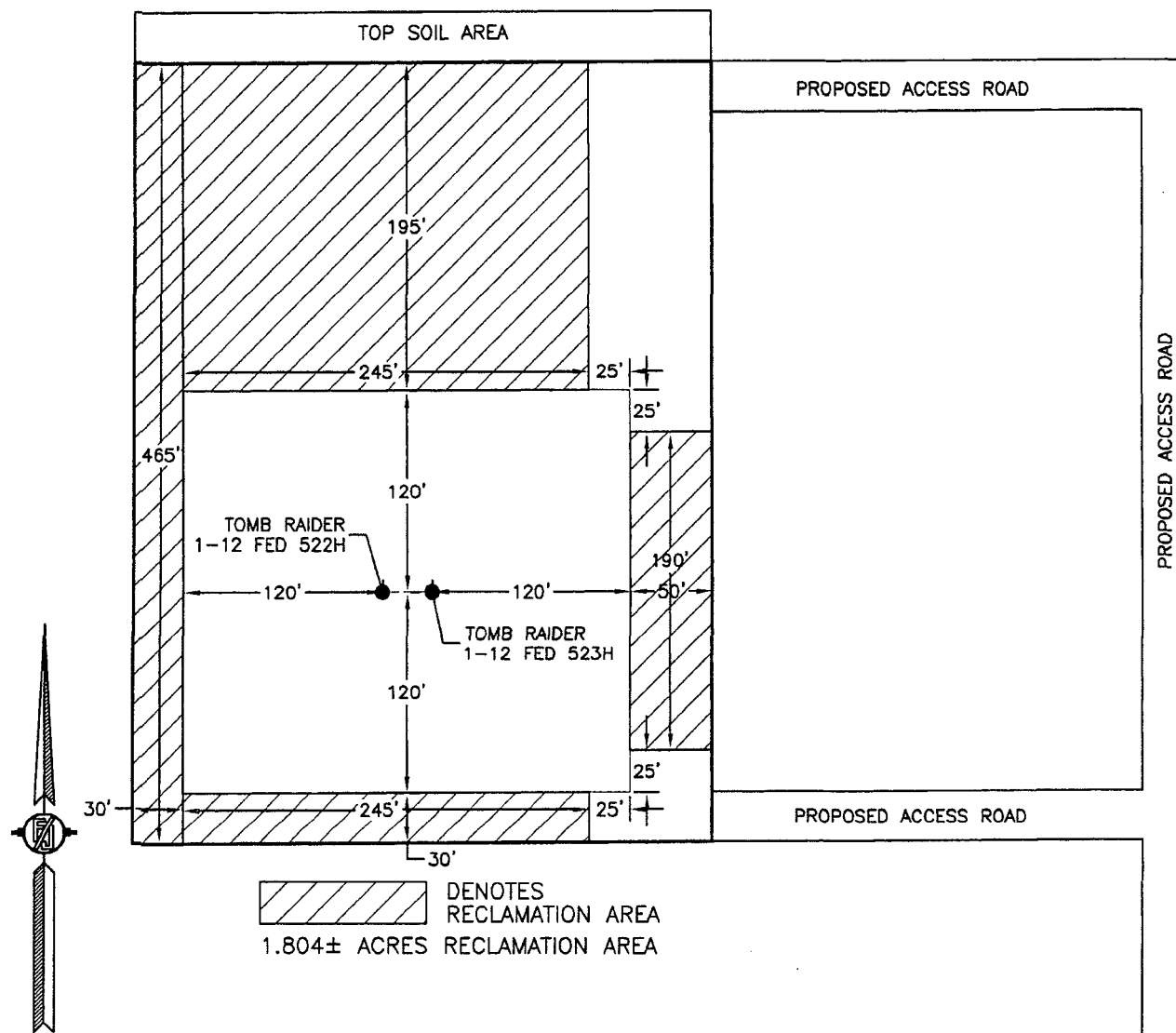
Total: 7,822.03 ft



42

PAVILION

SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
INTERIM SITE RECLAMATION



010 50 100 200
SCALE 1" = 100'

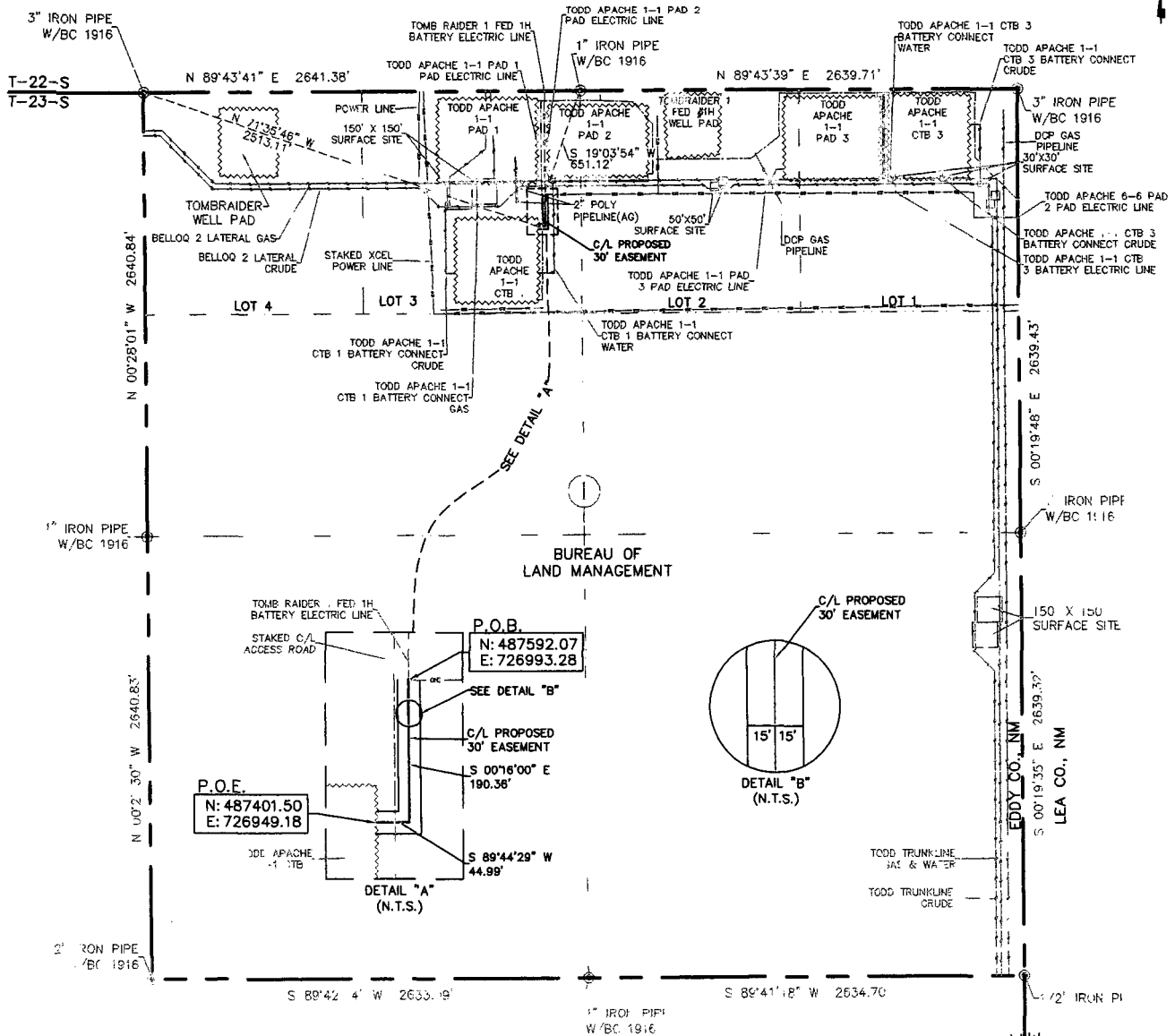
DEVON ENERGY PRODUCTION COMPANY, L.P.
TOMB RAIDER 1-12 FED 522H
LOCATED 360 FT. FROM THE NORTH LINE
AND 1929 FT. FROM THE WEST LINE OF
SECTION 1, TOWNSHIP 23 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

NOVEMBER 9, 2016

SURVEY NO. 5051A

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

EXHIBIT "A"
PAGE 1 of 4
ELECTRIC LINE PLAT
SECTION 1, T23S-R31E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



30' EASEMENT AREA = 0.162 ACRE(S)
235.35 FEET OR 14.26 RODS

0+00.0 P.O.B./TOMB RAIDER 1 FED 1H BATTERY ELECTRIC LINE
1+90.4 STAKED POWER POLE
2+10.3 C/L STAKED ACCESS ROAD
2+35.4 P.O.E./TODD APACHE 1-1 CTB 1

SEE THE ATTACHED LEGAL DESCRIPTION

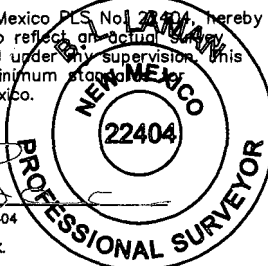
Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

0 1000 2000



B.L. Laman PLS #22404
Date Signed: 08-05-2015
571 State Street, Jasper, TX
(409) 202-5111 75951
Employee of Horizonrow, LLC



HORIZON ROW LLC

Drawn for:

devon

Drawn by:
CHRIS MAAS

Date: 08/03/2016

DEVON ENERGY PRODUCTION COMPANY, L.P.

TODD APACHE 1-1 CTB 1
BATTERY ELECTRIC LINE

PROPOSED 30' EASEMENT
ON THE PROPERTY OF
BUREAU OF LAND MANAGEMENT
SECTION 1, T23S-R31E, N.M.P.M.

LINE NUMBER:
EL7833

WBS NUMBER:
XX-117680

SCALE:
1" = 1000'

REVISIONS:

SHEET:
1 OF 4

**SECTION 1, T23S-R31E, N.M.P.M.,
EDDY COUNTY, NEW MEXICO**

ELECTRIC LINE PLAT

LEGAL DESCRIPTION

FOR

DEVON ENERGY PRODUCTION COMPANY, L.P.

BUREAU OF LAND MANAGEMENT

30' EASEMENT DESCRIPTION:

BEING an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of Lot 3 of Section 1, Township 23 South, Range 31 East, N.M.P.M., Eddy County, New Mexico, and being out of a parcel of land owned by the Bureau of Land Management. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/ BC 1916 for the north quarter corner of Section 1, T23S-R31E, N.M.P.M., Eddy County, New Mexico;

Thence S 19°03'54" W a distance of 651.12' to the **Point of Beginning** of this easement having coordinates of Northing=487592.07, Easting=726993.28 feet, and continuing the following courses;

Thence S 00°16'00" E a distance of 190.36' to an angle point;

Thence S 89°44'29" W a distance of 44.99' to the **Point of Ending** having coordinates of Northing=487401.50, Easting=726949.18 feet in Lot 3, from said point a 3" iron pipe w/ BC 1916 for the northwest corner of Section 1, T23S-R31E bears N 71°35'46" E a distance of 2513.11', covering **235.35' or 14.26 rods** and having an area of **0.162 acres**.

NOTES:

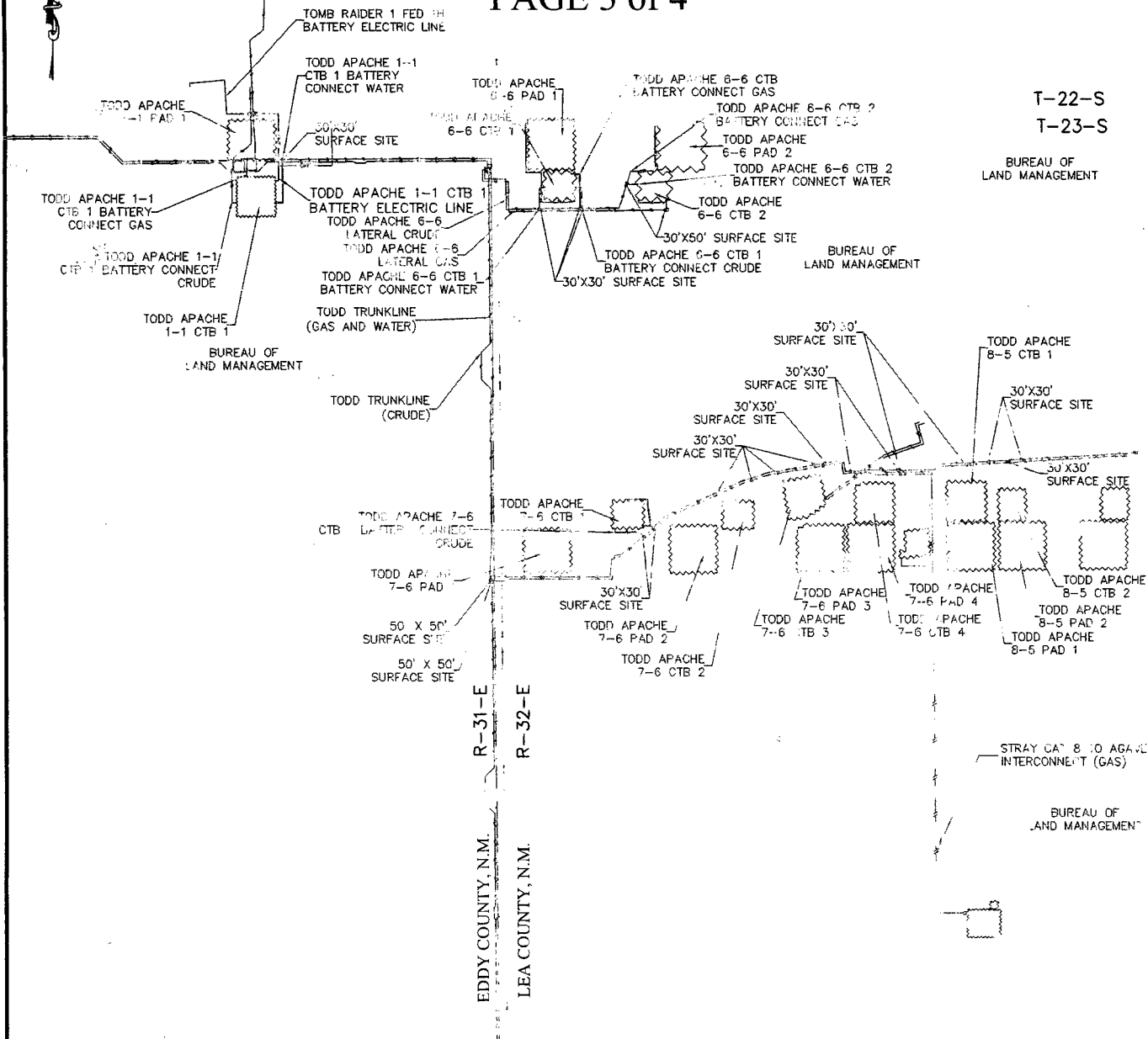
Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.


B.L. Laman PLS 22404
Date Signed: 08/05/2016
Horizon Row, LLC
571 State Street, Jasper, TX
(409) 202-5111 75951
Employee of Horizon Row, LLC



EXHIBIT "A"
PAGE 3 of 4

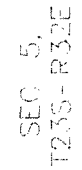


QUAD MAP

SECTION 1, T23S-R31E, N.M.P.M.;
EDDY COUNTY, NEW MEXICO

HORIZON ROW LLC		Drawn for: 	LINE NUMBER: EL7833
DEVON ENERGY PRODUCTION CO., L.P.			WBS NUMBER: XX-117680
PROPOSED 30' EASEMENT			SCALE: 1" = 2000'
Drawn by: CHRIS MAAS	Date: 08/03/2016		REVISIONS:
			SHEET: 3 OF 4

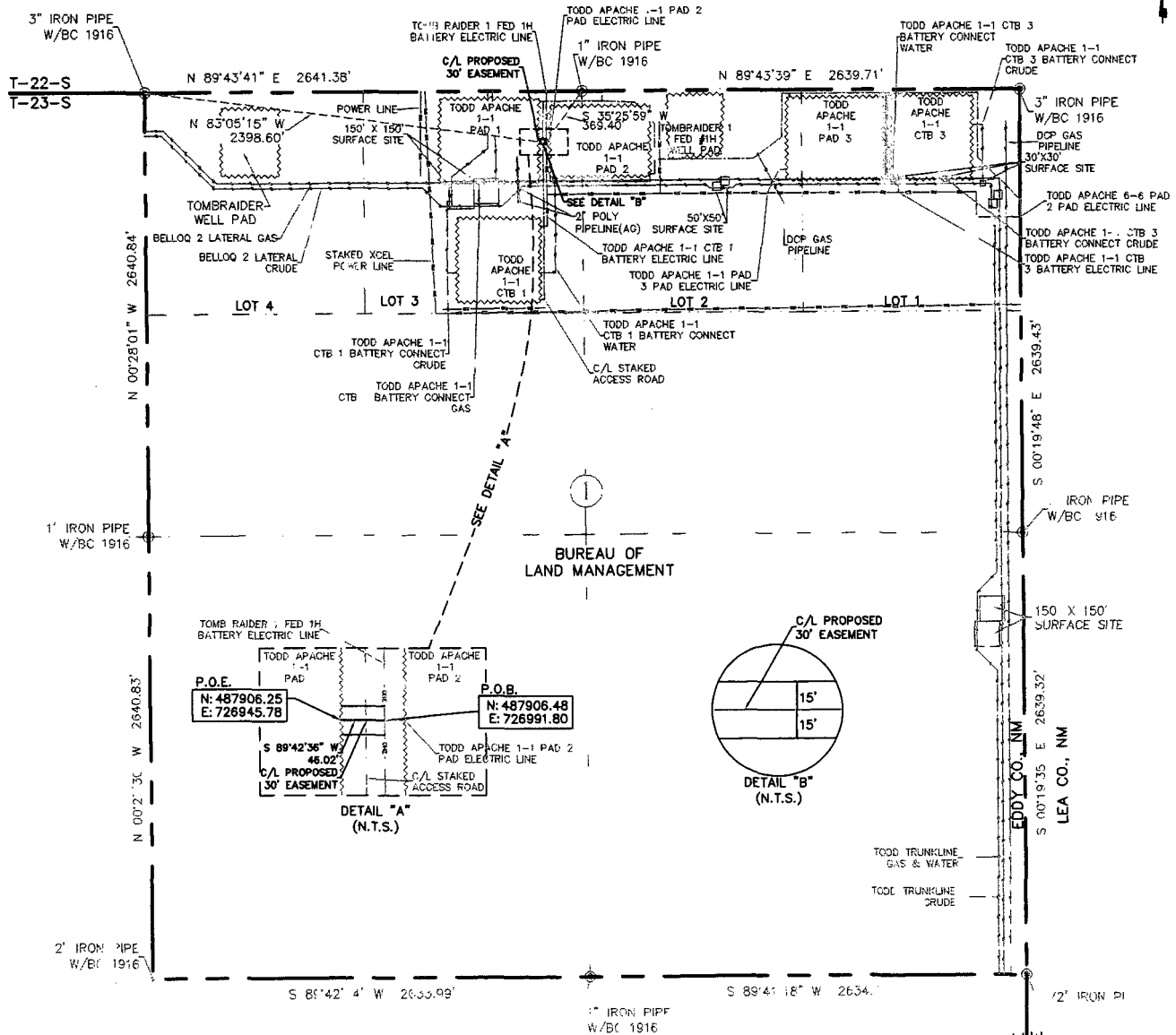
§



SECTION 1, T23S-R31E, N.M.P.M.;
EDDY COUNTY, NEW MEXICO

devon

EXHIBIT "A"
PAGE 1 of 4
ELECTRIC LINE PLAT
SECTION 1, T23S-R31E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



30' EASEMENT AREA = 0.032 ACRE(S)
46.02 FEET OR 2.79 RODS

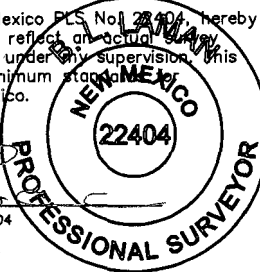
0+00.0 P.O.B./TOMB RAIDER 1 FED 1H BATTERY ELECTRIC LINE/
TODD APACHE 1-1 PAD 2 PAD ELECTRIC LINE
0+19.9 C/L STAKED ACCESS ROAD
0+46.0 P.O.E./TODD APACHE 1-1 PAD 1

SEE THE ATTACHED LEGAL DESCRIPTION

Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS #22404
Date Signed: 08-05-2016
571 State Street, Jasper, TX.
(409) 202-5111 75951
Employee of Horizonrow, LLC



HORIZON ROW LLC

Drawn for:

devon

Drawn by:
CHRIS MAAS

Date: 08/04/2016

DEVON ENERGY PRODUCTION COMPANY, L.P.

TODD APACHE 1-1 PAD 1
PAD ELECTRIC LINE

PROPOSED 30' EASEMENT
ON THE PROPERTY OF
BUREAU OF LAND MANAGEMENT
SECTION 1, T23S-R31E, N.M.P.M.

LINE NUMBER:
EL7834

WBS NUMBER:
XX-117680

SCALE:
1" = 1000'

REVISIONS:

SHEET:
1 OF 4

0 1000 2000



**SECTION 1, T23S-R31E, N.M.P.M.,
EDDY COUNTY, NEW MEXICO**

ELECTRIC LINE PLAT

LEGAL DESCRIPTION

FOR

DEVON ENERGY PRODUCTION COMPANY, L.P.

BUREAU OF LAND MANAGEMENT

30' EASEMENT DESCRIPTION:

BEING an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of Lot 3 of Section 1, Township 23 South, Range 31 East, N.M.P.M., Eddy County, New Mexico, and being out of a parcel of land owned by the Bureau of Land Management. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/ BC 1916 for the north quarter corner of Section 1, T23S-R31E, N.M.P.M., Eddy County, New Mexico;

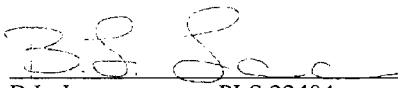
Thence S 35°25'59" W a distance of 369.40' to the **Point of Beginning** of this easement having coordinates of Northing=487906.48, Easting=726991.80 feet, and continuing the following course;

Thence S 89°42'36" W a distance of 46.02' to the **Point of Ending** having coordinates of Northing=487906.25, Easting=726945.78 feet in Lot 3, from said point a 3" iron pipe w/ BC 1916 for the northwest corner of Section 1, T23S-R31E bears N 83°05'15" W a distance of 2398.60', covering **46.02'** or **2.79 rods** and having an area of **0.032 acres**.

NOTES:

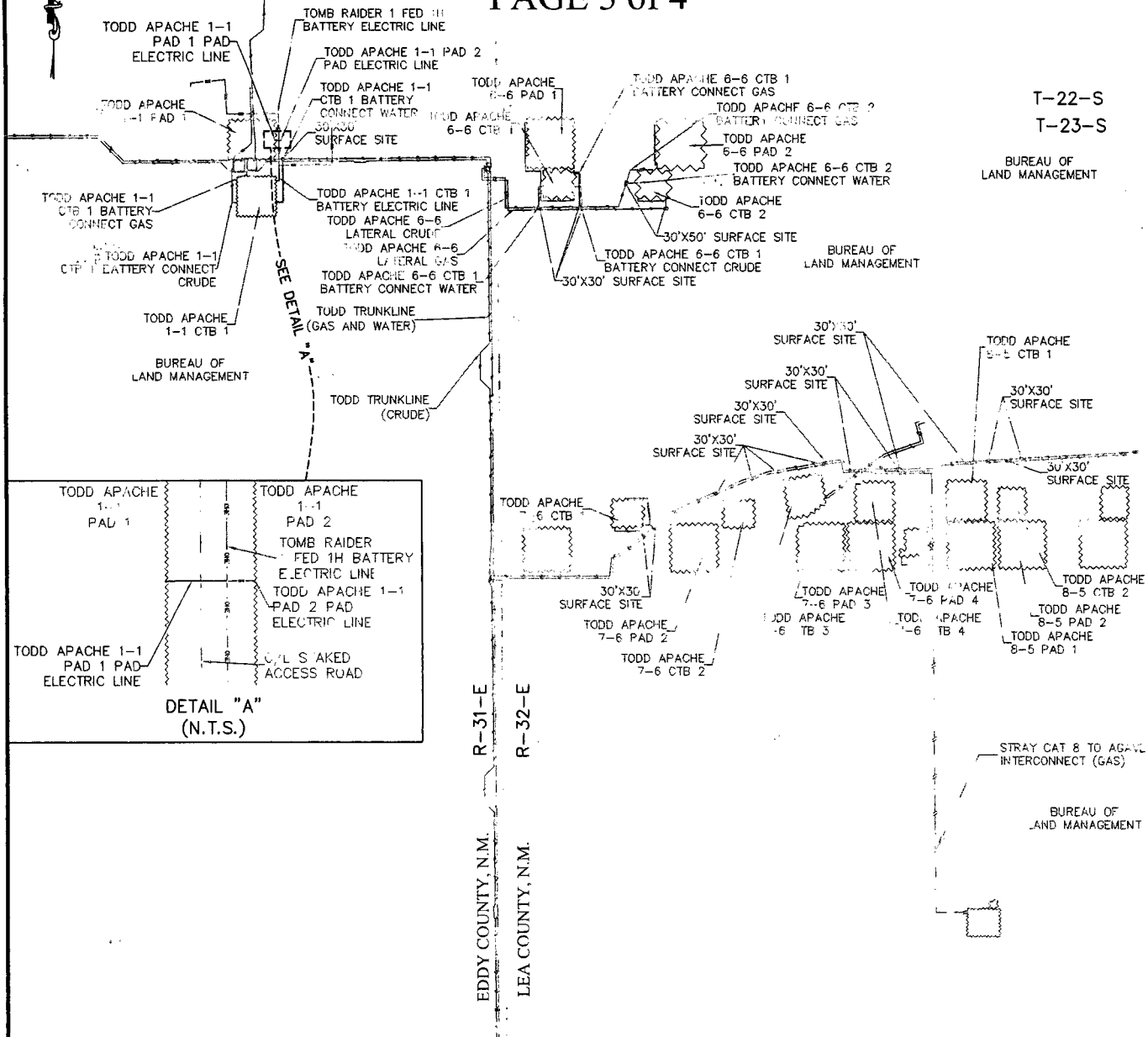
Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.


B.L. Laman PLS 22404
Date Signed: 08/05/2016
Horizon Row, LLC
571 State Street, Jasper, TX
(409) 202-5111 75951
Employee of Horizon Row, LLC



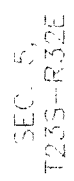
PAGE 3 of 4



QUAD MAP

SECTION 1, T23S-R31E, N.M.P.M.;
EDDY COUNTY, NEW MEXICO

<i>HORIZON ROW LLC</i>		Drawn for: 	LINE NUMBER: EL7834
DEVON ENERGY PRODUCTION CO., L.P.			WBS NUMBER: XX-117680
PROPOSED 30' EASEMENT			SCALE: 1" = 2000'
Drawn by: CHRIS MAAS	Date: 08/04/2016		REVISIONS:
			SHEET: 3 OF 4



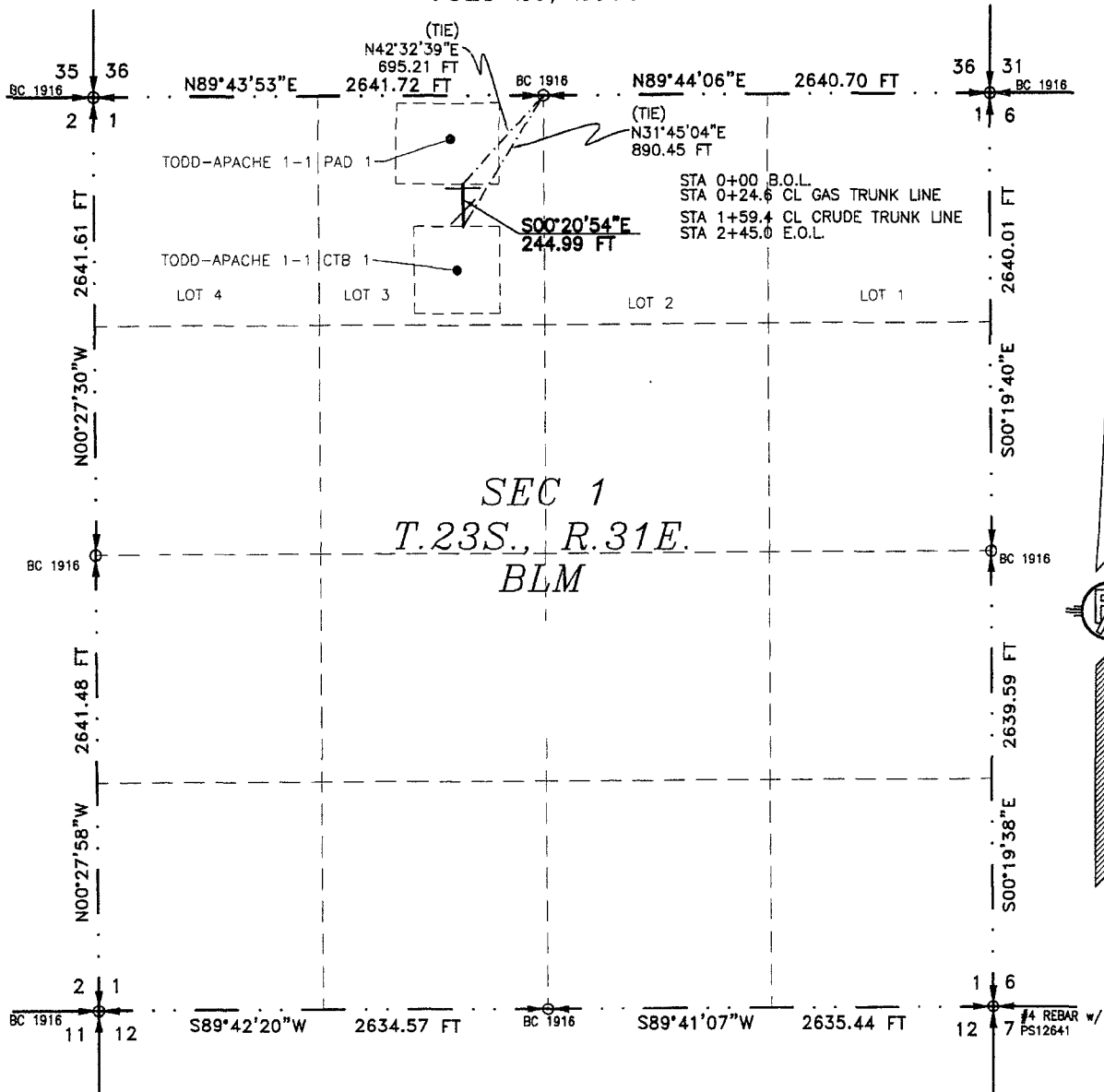
SECTION 1, T23S-R31E, N.M.P.M.;
EDDY COUNTY, NEW MEXICO

devon

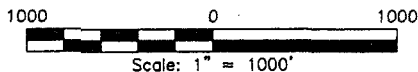
FLOWLINE PLAT (400690XYZ)

70' MULTI-USE RIGHT-OF-WAY FROM THE TODD-APACHE 1-1 PAD 1 TO THE TODD-APACHE 1-1 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P. CENTERLINE SURVEY OF A MULTI-USE EASEMENT SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO JULY 20, 2016



SEE NEXT SHEET (2-4) FOR DESCRIPTION



GENERAL NOTES

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 26 DAY OF JULY 2016

[Signature of Filimon F. Jaramillo]
FILIMON F. JARAMILLO, P.S. 12797
301 SOUTH CANAL
(575) 234-3341

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SHEET: 1-4

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

SURVEY NO. 4800A

FLOWLINE PLAT (400690XYZ)

70' MULTI-USE RIGHT-OF-WAY FROM THE TODD-APACHE 1-1 PAD 1 TO THE TODD-APACHE 1-1 CTB 1

**DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF A MULTI-USE EASEMENT
SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
JULY 20, 2016**

DESCRIPTION

A STRIP OF LAND 70 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 35 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN LOT 3 OF SAID SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N42°32'39"E, A DISTANCE OF 695.21 FEET;

THENCE S00°20'54"E A DISTANCE OF 244.99 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N31°45'04"E, A DISTANCE OF 890.45 FEET;

SAID STRIP OF LAND BEING 244.99 FEET OR 14.85 RODS IN LENGTH, CONTAINING 0.394 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

LOT 3 244.99 L.F. 14.85 RODS 0.394 ACRES

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 26 DAY OF JULY 2016

FILIMON F. JARAMILLO, PLS. 12797
MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SHEET: 2-4

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

SURVEY NO. 4800A

FLOWLINE PLAT (400690XYZ)

70' MULTI-USE RIGHT-OF-WAY FROM THE TODD-APACHE 1-1 PAD 1 TO THE TODD-APACHE 1-1 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF A MULTI-USE EASEMENT
SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
JULY 20, 2016

Drill Hole

TODD-APACHE 1-1 PAD 1

Gravel

TODD-APACHE 1-1 CTB 1

STA 0+00 B.O.L.

STA 2+45.0 E.O.L.



SHEET: 3-4

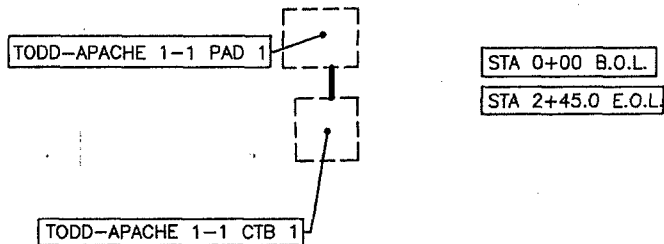
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SURVEY NO. 4800A

FLOWLINE PLAT (400690XYZ)

70' MULTI-USE RIGHT-OF-WAY FROM THE TODD-APACHE 1-1 PAD 1 TO THE TODD-APACHE 1-1 CTB 1

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JULY 20, 2016



SHEET: 4-4

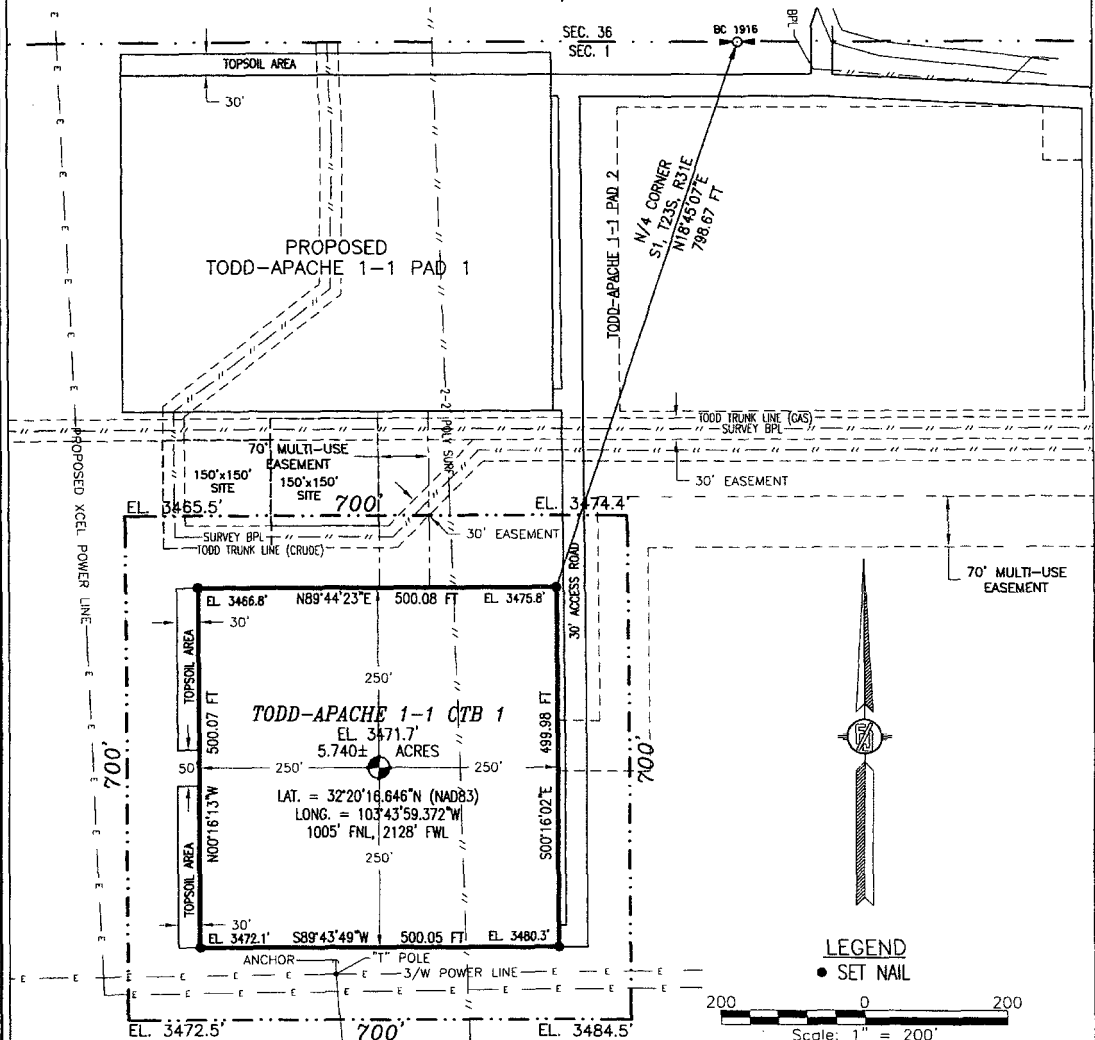
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SURVEY NO. 4800A

TODD-APACHE 1-1 CTB 1 (AA000056016)

DEVON ENERGY PRODUCTION COMPANY, L.P.
IN LOT 3 OF
SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JULY 20, 2016



DESCRIPTION

A CERTAIN PIECE OR PARCEL OF LAND AND REAL ESTATE LYING IN LOT 3 OF SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST N.M.P.M., EDDY COUNTY, NEW MEXICO.

BEGINNING AT THE NORTHEAST CORNER OF THE PARCEL, WHENCE THE NORTH QUARTER CORNER OF SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N18°45'07\"E, A DISTANCE OF 798.67 FEET;
THENCE S00°16'02\"E A DISTANCE OF 499.98 FEET TO THE SOUTHEAST CORNER OF THE PARCEL;
THENCE S89°43'49\"W A DISTANCE OF 500.05 FEET TO THE SOUTHWEST CORNER OF THE PARCEL;
THENCE N00°16'13\"W A DISTANCE OF 500.07 FEET TO THE NORTHWEST CORNER OF THE PARCEL;
THENCE N89°44'23\"E A DISTANCE OF 500.08 FEET TO THE NORTHEAST CORNER OF THE PARCEL, TO THE POINT OF BEGINNING;
CONTAINING 5.740 ACRES MORE OR LESS.

GENERAL NOTES

- 1.) THE INTENT OF THIS SURVEY IS TO ACQUIRE A BUSINESS LEASE FOR THE PURPOSE OF BUILDING A CENTRAL TANK BATTERY
- 2.) BASIS OF BEARING IS NEW MEXICO STATE PLANE EAST ZONE MODIFIED TO THE SURFACE (NAD83)

DRIVING DIRECTION: FROM STATE HIGHWAY 128 AND CR 798 (RED ROAD) GO NORTH ON CR 798 6.4 MILES, TURN RIGHT ON CALICHE ROAD AND GO EAST 0.4 OF A MILE, BEND RIGHT AND GO SOUTH 0.15 OF A MILE, BEND LEFT AND GO SOUTHEAST 0.19 OF A MILE, TURN RIGHT AND GO SOUTH 0.11 OF A MILE TO A PROPOSED ROAD SURVEY WHERE ROAD BENDS LEFT. FOLLOW FLAGS SOUTH 90°, THEN WEST 378°, THEN SOUTH 1180°, THEN WEST 25° TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

SHEET: 1-3

MADRON SURVEYING, INC.

SURVEYOR CERTIFICATE

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 29TH DAY OF JULY 2016

FILMON F. JARAMILLO, SURVEYOR
3611 SOUTH CANAL
(575) 234-3341

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

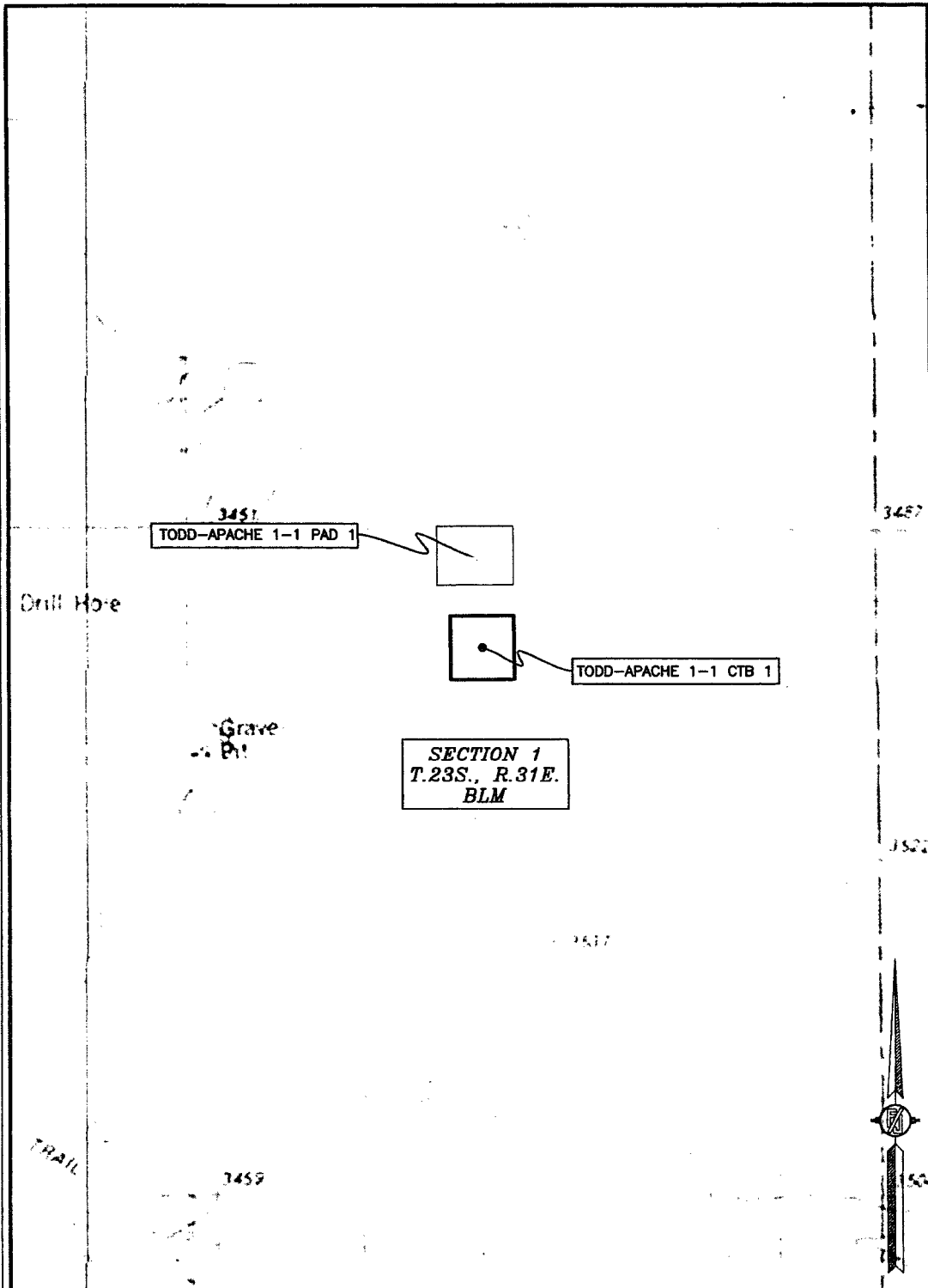
SURVEY NO. 4527D
CARLSBAD, NEW MEXICO

TODD-APACHE 1-1 CTB 1 (AA000056016)

DEVON ENERGY PRODUCTION COMPANY, L.P.
IN LOT 3 OF
SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JULY 20, 2016

QUAD MAP



SHEET: 2-3

SURVEY NO. 4527D

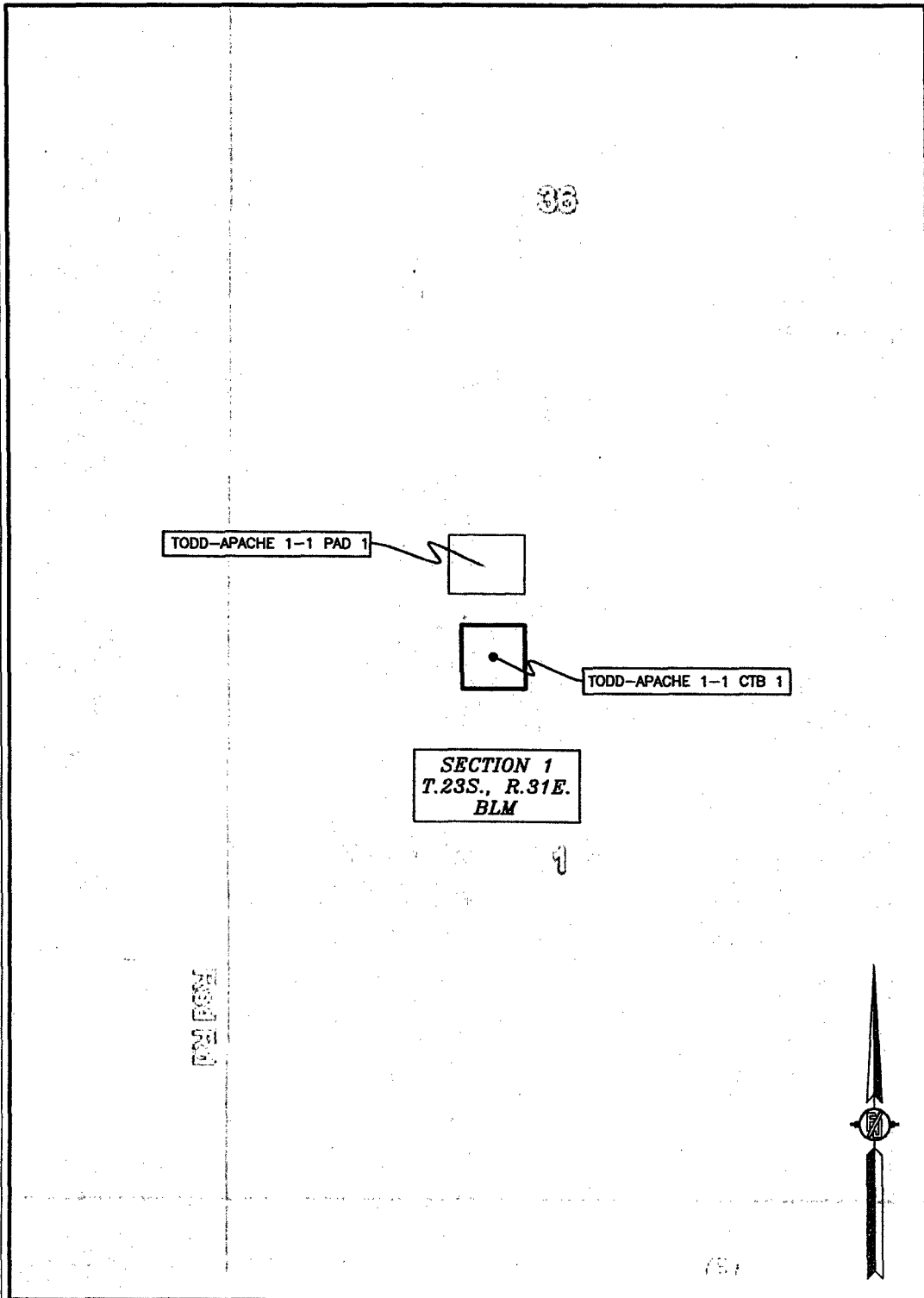
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO
(575) 234-3341

TODD-APACHE 1-1 CTB 1 (AA000056016)

DEVON ENERGY PRODUCTION COMPANY, L.P.
IN LOT 3 OF
SECTION 1, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JULY 20, 2016

AERIAL PHOTO



SHEET: 3-3

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

SURVEY NO. 4527D

Section 1 - General

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

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

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

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

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

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number:

Injection well name:

Assigned injection well API number?

Injection well API number:

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB000801

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: