

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. EAGLE 34 K FEDERAL 77
2. Name of Operator LIME ROCK RESOURCES II A LP Contact: MIKE PIPPIN E-Mail: MIKE@PIPPINLLC.COM		9. API Well No. 30-015-43886-00-X1
3a. Address 1111 BAGBY STREET SUITE 4600 HOUSTON, TX 77002	3b. Phone No. (include area code) Ph: 505-327-4573	10. Field and Pool or Exploratory Area RED LAKE
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 34 T17S R27E NESW 2440FSL 2465FWL		11. County or Parish, State EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A PD
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomple in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

THIS IS FOR A CHANGE TO THE ORIGINAL APD. THE SURFACE LOCATION WILL NOW BE AT 2405' FNL & 2440' FWL SEC 34, T17S R27E.

The surface location on the original APD for this new well became unacceptable when a buried gas line was discovered across the middle of the proposed location. It was therefore necessary to move the surface location to 2405' FNL & 2440' FWL SEC 34 T17S R27E. The proposed bottom hole location will remain the same. Please see the attached new C-102 and its accompanied data and the new directional drilling plan.

Accepted for record - NMOC

1-20-17

Raymond K. Dodson

14. I hereby certify that the foregoing is true and correct. Electronic Submission #353584 verified by the BLM Well Information System For LIME ROCK RESOURCES II A LP, sent to the Carlsbad Committed to AFMSS for processing by DEBORAH MCKINNEY on 10/07/2016 (17DLM0032SE)	
Name (Printed/Typed) MIKE PIPPIN	Title PETROLEUM ENGINEER
Signature (Electronic Submission)	Date 10/05/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>CODY LAYTON</u>	Title <u>NATURAL RESOURCE SPECIALIST</u>	Date <u>01/19/2017</u>
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office <u>Carlsbad</u>

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-0720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code		3 Pool Name					
4 Property Code 308957		5 Property Name EAGLE 34 K FEDERAL						6 Well Number 77	
7 OGRID No. 277558		8 Operator Name LIME ROCK RESOURCES II-A, L.P.						9 Elevation 3564.5	
10 Surface Location									
UL or lot no. F	Section 34	Township 17 S	Range 27 E	Lot Idn	Feet from the 2405	North/South line NORTH	Feet from the 2440	East/West line WEST	County EDDY
11 Bottom Hole Location If Different From Surface									
UL or lot no. K	Section 34	Township 17 S	Range 27 E	Lot Idn	Feet from the 2310	North/South line SOUTH	Feet from the 2285	East/West line WEST	County EDDY
12 Dedicated Acres		13 Joint or Infill		14 Consolidation Code		15 Order No.			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

N89°05'18"E 2595.15 FT		N89°05'43"E 2594.17 FT	
NW CORNER SEC. 34 LAT. = 32.7979460°N LONG. = 104.2750255°W NMSP EAST (FT) N = 654030.12 E = 559253.94	N/4 CORNER SEC. 34 LAT. = 32.7980553°N LONG. = 104.2665830°W NMSP EAST (FT) N = 654071.39 E = 561848.10	NE CORNER SEC. 34 LAT. = 32.7981630°N LONG. = 104.2581435°W NMSP EAST (FT) N = 654112.34 E = 564441.27	
EAGLE 34 K FEDERAL 77 ELEV. = 3564.5' LAT. = 32.7914391°N (NAD83) LONG. = 104.2670910°W NMSP EAST (FT) N = 651664.25 E = 561693.50		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.	
W/4 CORNER SEC. 34 LAT. = 32.7906614°N LONG. = 104.2750296°W NMSP EAST (FT) N = 651379.86 E = 559254.14	E/4 CORNER SEC. 34 LAT. = 32.7907869°N LONG. = 104.2580275°W NMSP EAST (FT) N = 651428.83 E = 564478.85		
SURFACE LOCATION			
BOTTOM OF HOLE			
BOTTOM OF HOLE LAT. = 32.7897394°N LONG. = 104.2675959°W NMSP EAST (FT) N = 651045.78 E = 561538.71			
SW CORNER SEC. 34 LAT. = 32.7833815°N LONG. = 104.2750310°W NMSP EAST (FT) N = 648731.32 E = 559255.19	S/4 CORNER SEC. 34 LAT. = 32.7833928°N LONG. = 104.2664711°W NMSP EAST (FT) N = 648737.00 E = 561885.83	SE CORNER SEC. 34 LAT. = 32.7834033°N LONG. = 104.2579143°W NMSP EAST (FT) N = 648742.59 E = 564515.53	
S89°52'34"W 2631.33 FT		S89°52'42"W 2630.39 FT	
N00°00'15"W 2650.95 FT		S00°48'08"E 2684.47 FT	
N00°01'22"W 2649.22 FT		S00°46'56"E 2687.19 FT	

17 OPERATOR CERTIFICATION

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

Signature _____ Date _____

Printed Name _____

E-mail Address _____

18 SURVEYOR CERTIFICATION

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

SEPTEMBER 29, 2010

Date of Survey _____

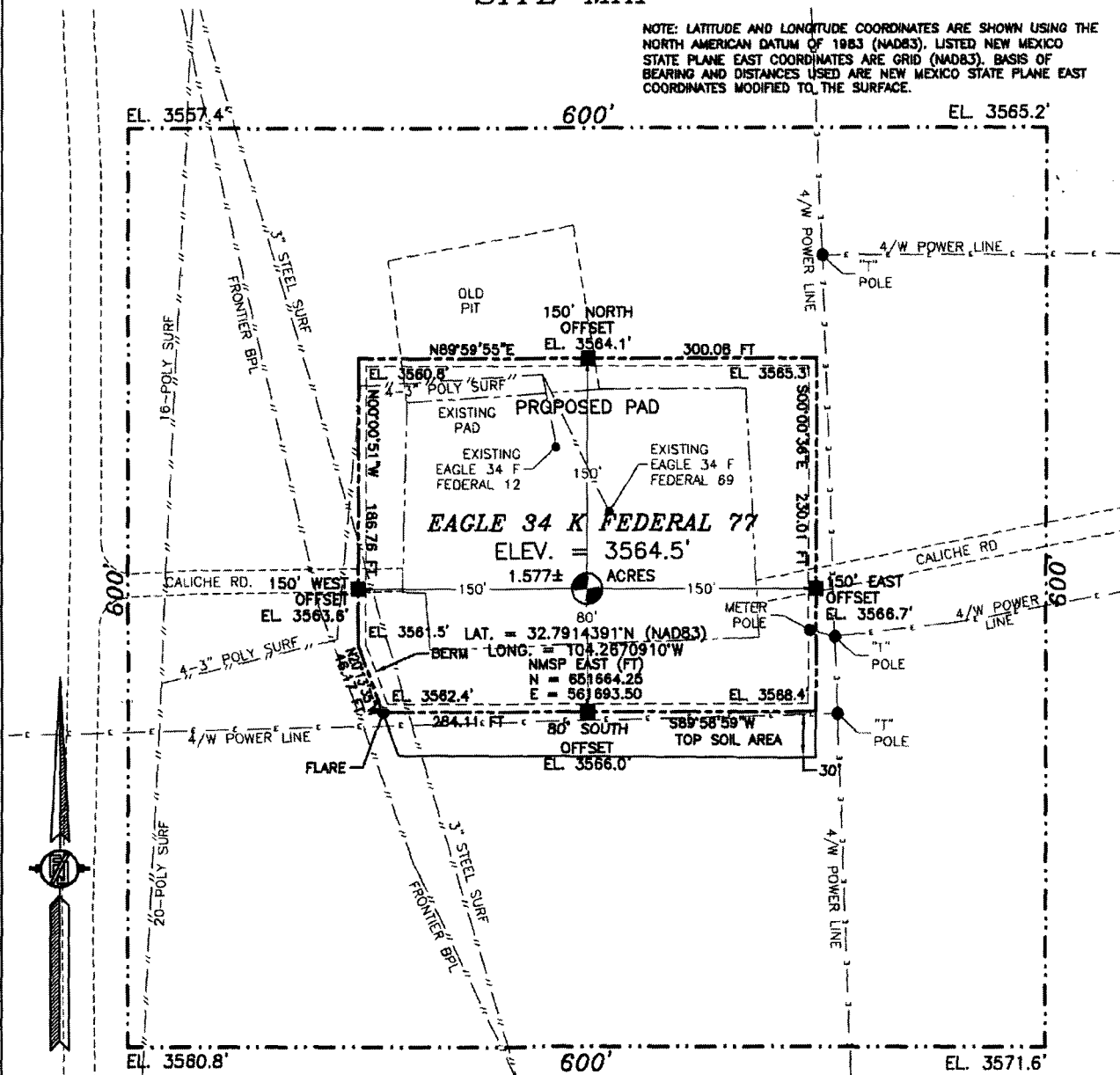
Signature and Seal of Professional Surveyor _____

Certificate Number: FILMON F. JARAMILLO, PLS 12797

PROFESSIONAL SURVEYOR NO. 2341A

SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP

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



0 10 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM CR. 225 (EMPIRE) AND CR. 227 (LITTLE DIAMOND) GO
SOUTHWEST ON CR. 227 0.5 MILE, TURN RIGHT ON CALICHE ROAD
AND GO NORTHWEST 0.75 MILE, BEND RIGHT AND GO NORTHEAST
750', BEND LEFT AND GO NORTH 0.2 MILE, TURN RIGHT AND GO
EAST 165' TO THE WEST EDGE OF PAD FOR THIS LOCATION.

LIME ROCK RESOURCES II-A, L.P.
EAGLE 34 K FEDERAL 77
LOCATED 2405 FT. FROM THE NORTH LINE
AND 2440 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 17 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 29, 2016

SURVEY NO. 2341A

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

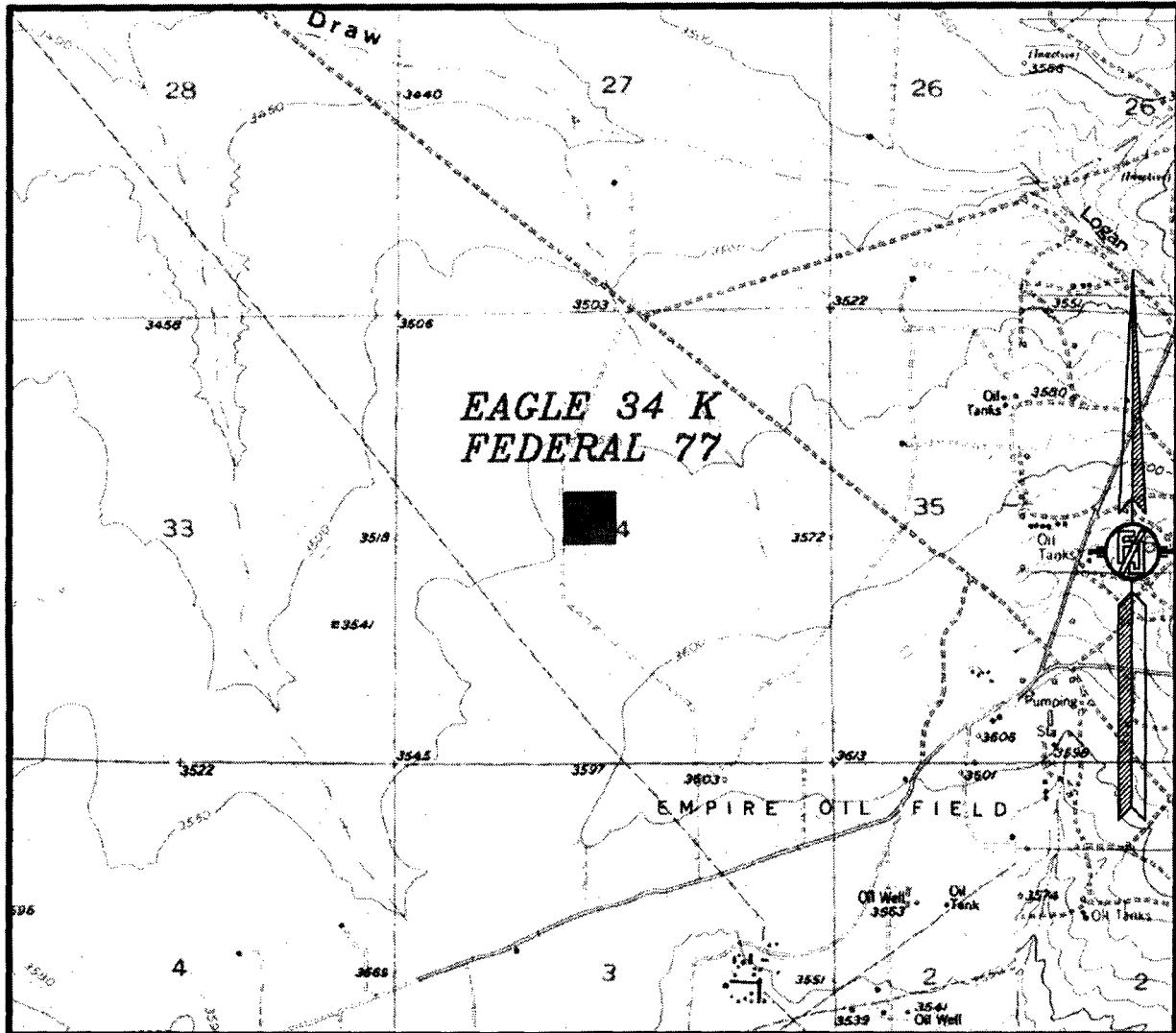
NOT TO SCALE

FROM CR. 225 (EMPIRE) AND CR. 227 (LITTLE DIAMOND) GO SOUTHWEST ON CR. 227 0.5 MILE, TURN RIGHT ON CALICHE ROAD AND GO NORTHWEST 0.75 MILE, BEND RIGHT AND GO NORTHEAST 750', BEND LEFT AND GO NORTH 0.2 MILE, TURN RIGHT AND GO EAST 165' TO THE WEST EDGE OF PAD FOR THIS LOCATION.

SEPTEMBER 29, 2016

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO SURVEY NO. 2341A

SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
SPRING LAKE

NOT TO SCALE

LIME ROCK RESOURCES II-A, L.P.
EAGLE 34 K FEDERAL 77
LOCATED 2405 FT. FROM THE NORTH LINE
AND 2440 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 17 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

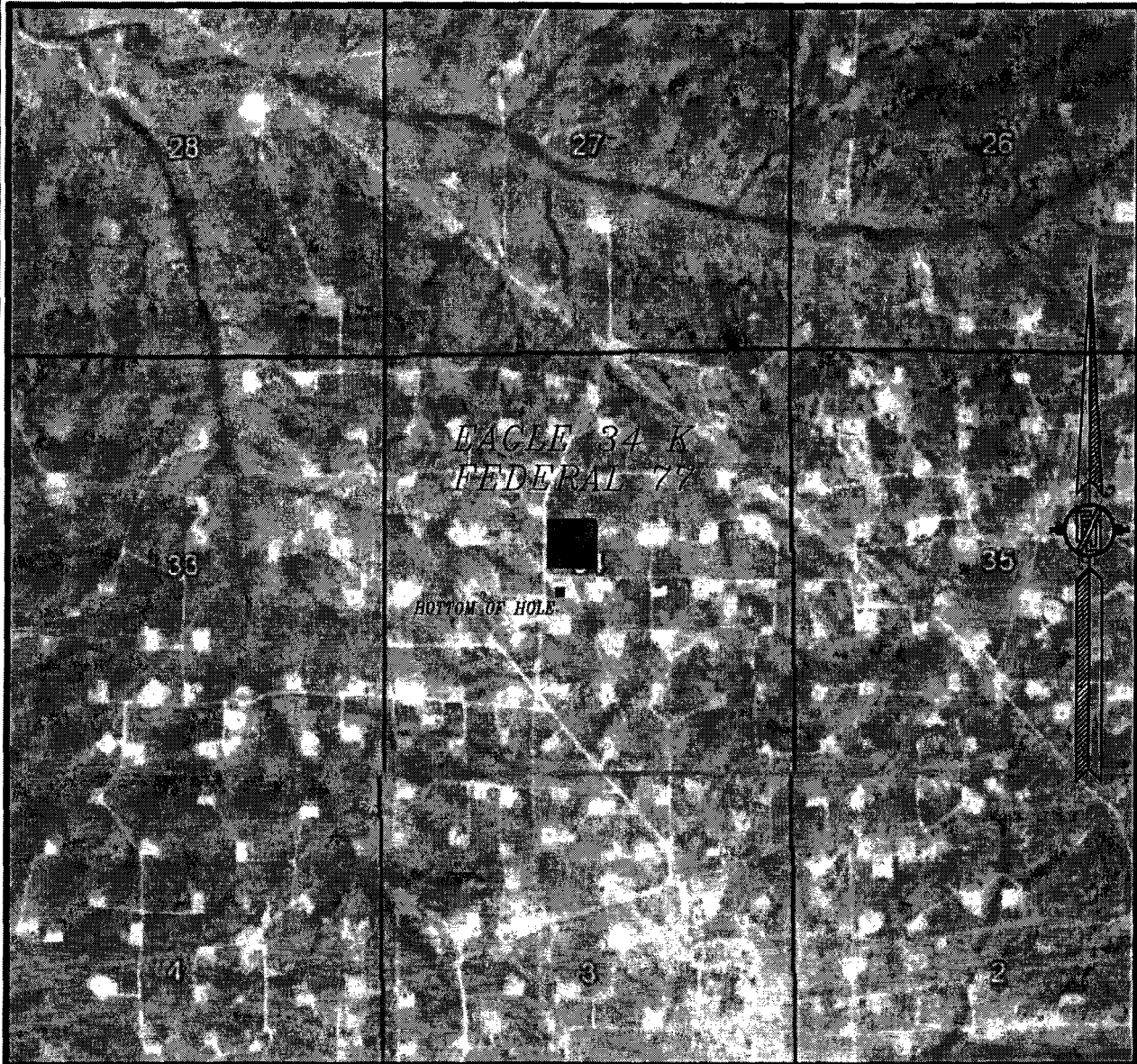
SEPTEMBER 29, 2016

SURVEY NO. 2341A

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

SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MAR. 2016

LIME ROCK RESOURCES II-A, L.P.
EAGLE 34 K FEDERAL 77

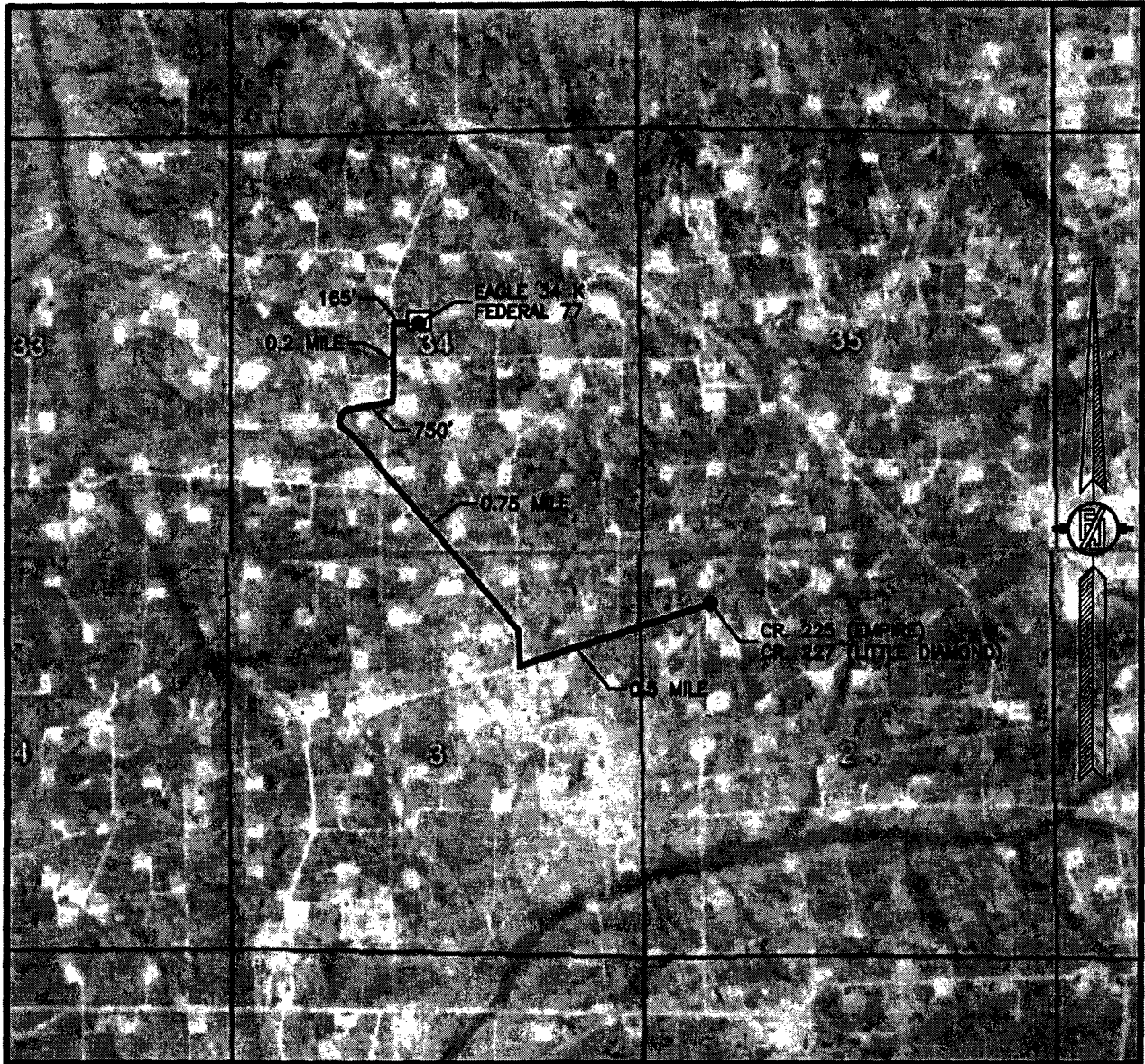
LOCATED 2405 FT. FROM THE NORTH LINE
AND 2440 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 17 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 29, 2016

SURVEY NO. 2341A

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

SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO
 AERIAL ACCESS ROUTE MAP



NOT TO SCALE
 AERIAL PHOTO:
 GOOGLE EARTH
 MAR. 2016

LIME ROCK RESOURCES II-A, L.P.
EAGLE 34 K FEDERAL 77
 LOCATED 2405 FT. FROM THE NORTH LINE
 AND 2440 FT. FROM THE WEST LINE OF
 SECTION 34, TOWNSHIP 17 SOUTH,
 RANGE 27 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 29, 2016

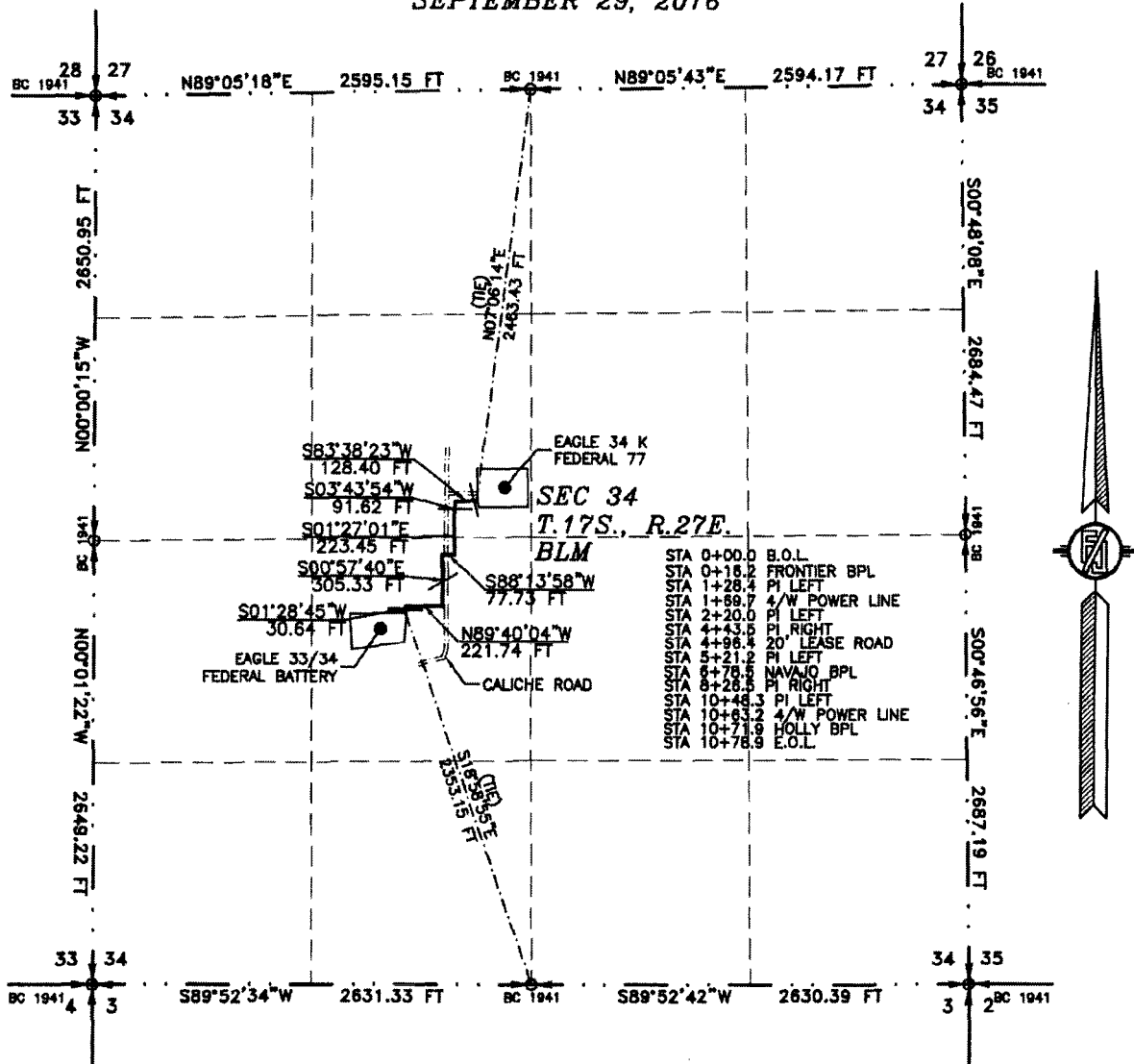
SURVEY NO. 2341A

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

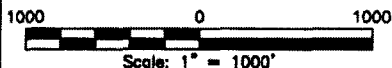
FLOWLINE PLAT

TWO 3" SURFACE POLY LINES (ONE GAS AND ONE PRODUCTION) FROM
EAGLE 34 K FEDERAL 77 TO EAGLE 33/34 FEDERAL BATTERY

LIME ROCK RESOURCES II-A, L.P.
CENTERLINE SURVEY OF A PIPELINE CROSSING
SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SEPTEMBER 29, 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 MODIFIED TO SURFACE COORDINATES.

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 30TH DAY OF SEPTEMBER 2016

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

SHEET: 1-4

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

FILMON F. JARAMILLO - 12797

SURVEY NO. 2341A

FLOWLINE PLAT

TWO 3" SURFACE POLY LINES (ONE GAS AND ONE PRODUCTION) FROM
EAGLE 34 K FEDERAL 77 TO EAGLE 33/34 FEDERAL BATTERY

LIME ROCK RESOURCES II-A, L.P.
CENTERLINE SURVEY OF A PIPELINE CROSSING
SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SEPTEMBER 29, 2016

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 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 THE SE/4 NW/4 OF SAID SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M., WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M. BEARS N07°06'14"E, A DISTANCE OF 2463.43 FEET;
THENCE S83°38'23"W A DISTANCE OF 128.40 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S03°43'54"W A DISTANCE OF 91.62 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S01°27'01"E A DISTANCE OF 223.45 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S88°13'58"W A DISTANCE OF 77.73 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S00°57'40"E A DISTANCE OF 305.33 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE N89°40'04"W A DISTANCE OF 221.74 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S01°28'45"W A DISTANCE OF 30.64 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M. BEARS S18°58'55"E, A DISTANCE OF 2353.15 FEET;

SAID STRIP OF LAND BEING 1078.92 FEET OR 65.39 RODS IN LENGTH, CONTAINING 0.743 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 NW/4	341.88 L.F.	20.72 RODS	0.235 ACRES
NE/4 SW/4	737.04 L.F.	44.67 RODS	0.508 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 30TH DAY OF SEPTEMBER 2016

FILIMON F. JARAMILLO, PLS. 12797

301 SOUTH CANAL
(575) 234-3341

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

SURVEY NO. 2341A

GENERAL NOTES

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

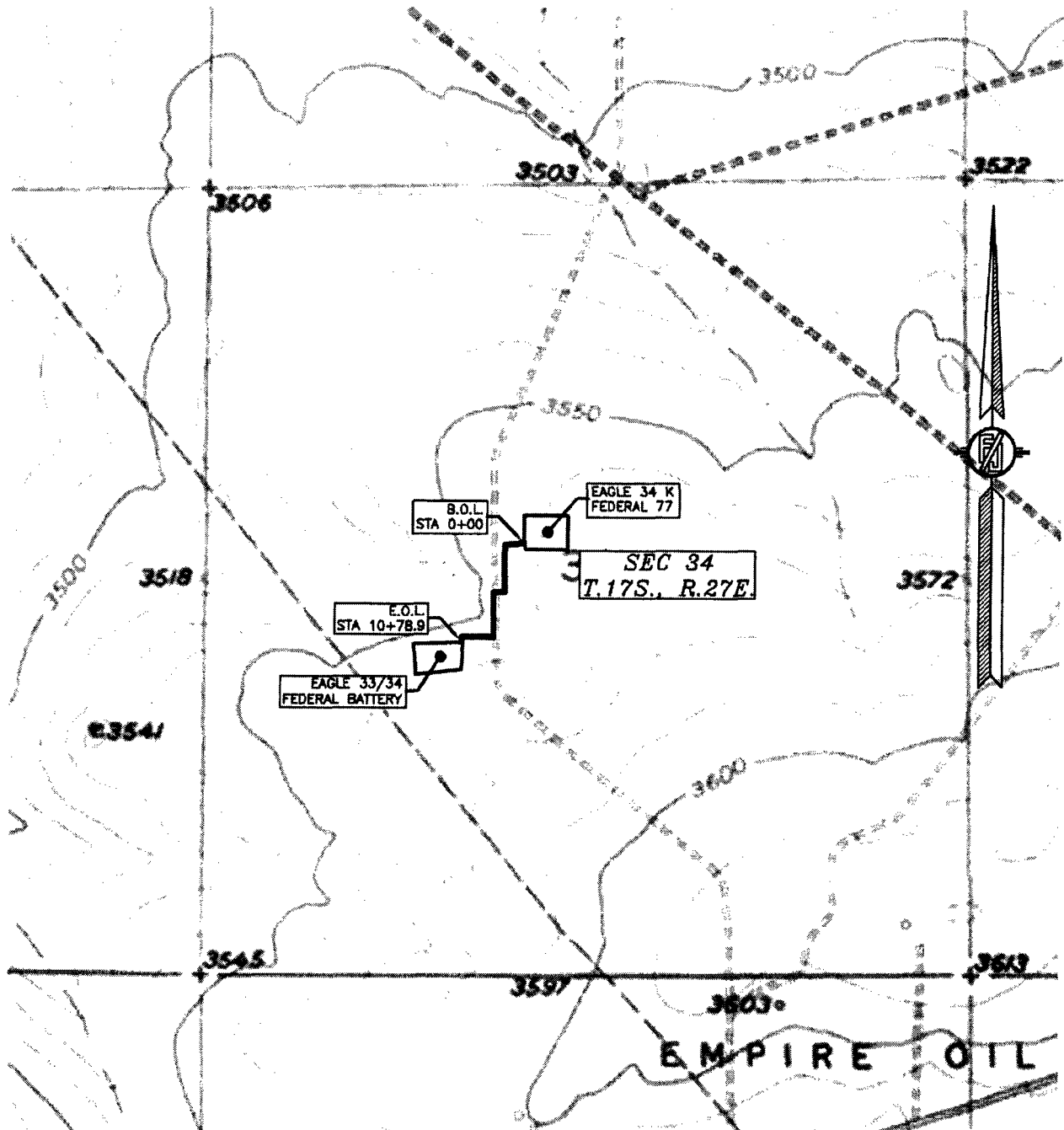
SHEET: 2-4

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

FLOWLINE PLAT

TWO 3" SURFACE POLY LINES (ONE GAS AND ONE PRODUCTION) FROM
EAGLE 34 K FEDERAL 77 TO EAGLE 33/34 FEDERAL BATTERY

LIME ROCK RESOURCES II-A, L.P.
CENTERLINE SURVEY OF A PIPELINE CROSSING
SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SEPTEMBER 29, 2016



SHEET: 3-4

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

SURVEY NO. 2341A

FLOWLINE PLAT

**TWO 3" SURFACE POLY LINES (ONE GAS AND ONE PRODUCTION) FROM
EAGLE 34 K FEDERAL 77 TO EAGLE 33/34 FEDERAL BATTERY**

**LIME ROCK RESOURCES II-A, L.P.
CENTERLINE SURVEY OF A PIPELINE CROSSING
SECTION 34, TOWNSHIP 17 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SEPTEMBER 29, 2016**



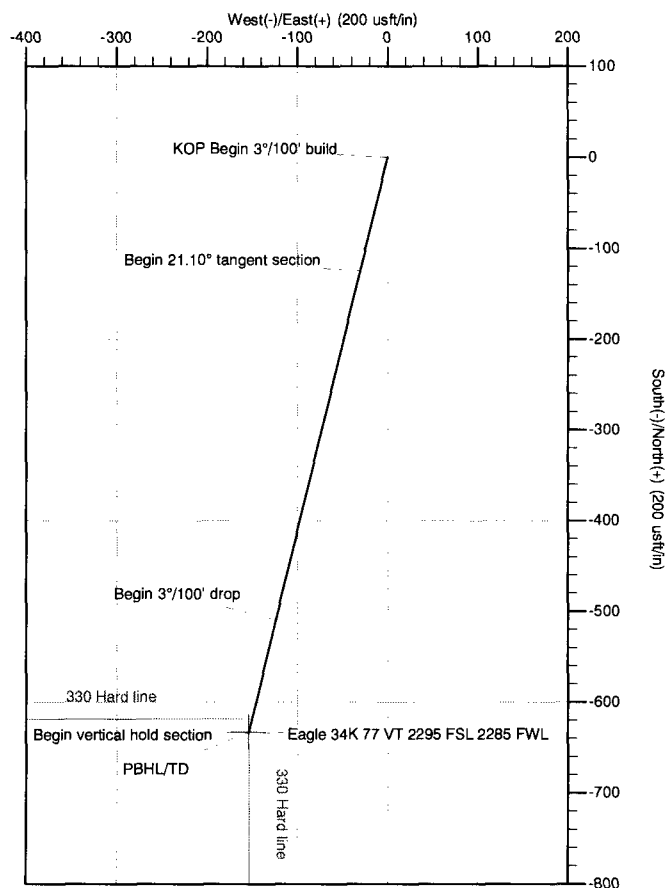
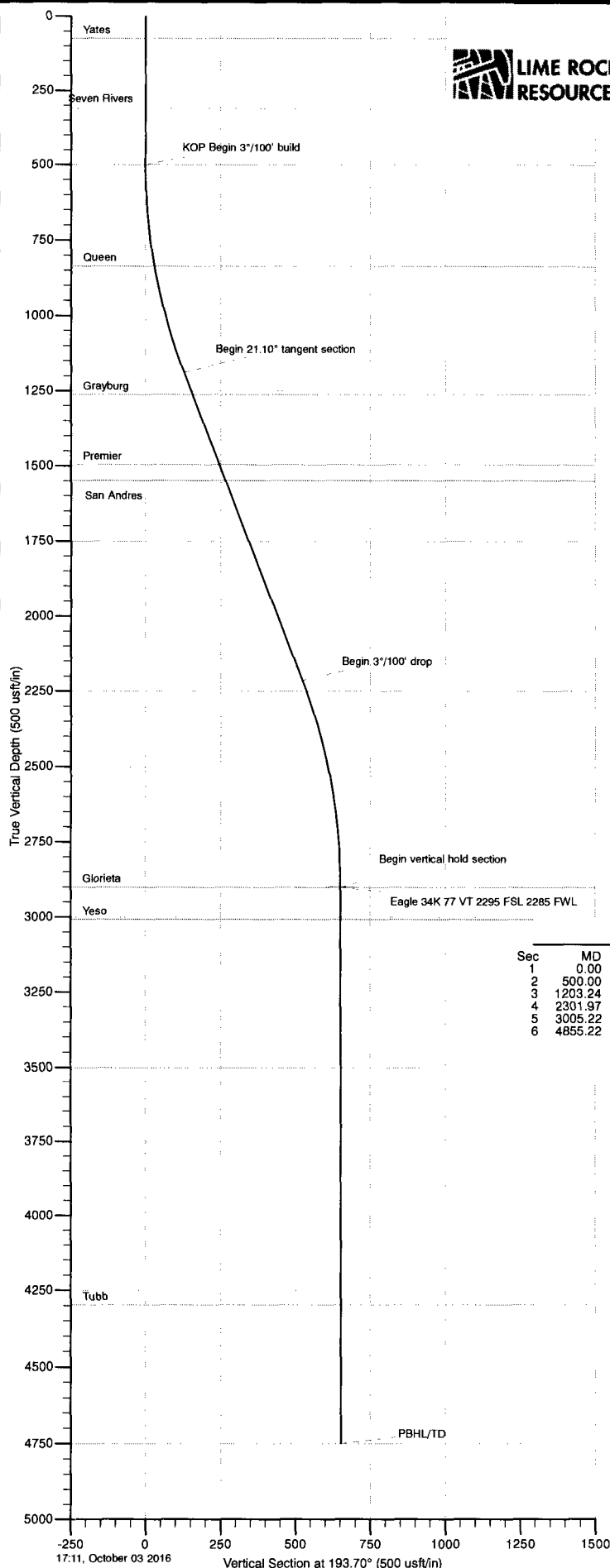
SHEET: 4-4

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

SURVEY NO. 2341A



Well: Eagle 34K Federal Well No. 77
 Site: Eagle 34K Federal
 Project: Eddy County, New Mexico NAD83
 Design: rev0
 Rig:



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 3°/100' build
3	1203.24	21.10	193.70	1187.46	-124.38	-30.31	3.00	193.70	128.02	Begin 21.10° tangent section
4	2301.97	21.10	193.70	2212.54	-508.62	-123.95	0.00	0.00	523.51	Begin 3°/100' drop
5	3005.22	0.00	193.70	2900.00	-633.00	-154.26	3.00	180.00	651.53	Begin vertical hold section
6	4855.22	0.00	193.70	4750.00	-633.00	-154.26	0.00	193.70	651.53	PBHL/TD

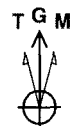
Surface Location: RKB=3564.5+12.8 @ 3577.30usft

US State Plane 1983

New Mexico Eastern Zone

Northing 651664.25 Easting 561693.50 Latitude 32.79143914 Longitude -104.26709098

Total Correction (M=> G)To convert a Magnetic Direction to a Grid Direction, Add 7.36°



Azimuths to Grid North
 True North: -0.04°
 Magnetic North: 7.36°

Magnetic Field
 Strength: 48271.0snT
 Dip Angle: 60.48°
 Date: 10/3/2016
 Model: IGRF2015





Standard_Report

Company: Lime Rock Resources	Local Co-ordinate Reference: Well Eagle 34K Federal Well No. 77
Project: Eddy County, New Mexico NAD83	TVD Reference: RKB=3564.5+12.8 @ 3577.30usft
Site: Eagle 34K Federal	MD Reference: RKB=3564.5+12.8 @ 3577.30usft
Well: Eagle 34K Federal Well No. 77	North Reference: Grid
Wellbore: Original hole	Survey Calculation Method: Minimum Curvature
Design: rev0	Database: DB Jul2216dt

Project Eddy County, New Mexico NAD83	System Datum: Mean Sea Level
Map System: US State Plane 1983	
Geo Datum: North American Datum 1983	
Map Zone: New Mexico Eastern Zone	

Site Eagle 34K Federal			
Site Position:			
From: Map	Northing: 651,144.01 usft	Latitude: 32.79001075	
Position Uncertainty: 0.00 usft	Easting: 560,758.82 usft	Longitude: -104.27013362	
	Slot Radius: 13-3/16 "	Grid Convergence: 0.03 °	

Well Eagle 34K Federal Well No. 77, Surf Loc: 2405 FNL 2440 FWL Sec34-T17S-R27E			
Well Position			
+N-S 0.00 usft	Northing: 651,664.25 usft	Latitude: 32.79143914	
+E-W 0.00 usft	Easting: 561,693.50 usft	Longitude: -104.26709098	
Position Uncertainty 0.00 usft	Wellhead Elevation: 0.00 usft	Ground Level: 3,564.50 usft	

Wellbore Original hole			
Magnetics			
Model Name IGRF2015	Sample Date 10/3/2016	Dip Angle (°) 60.48	Field Strength (nT) 48,271
		Declination (°) 7.39	

Design rev0			
Audit Notes:			
Version:			
Vertical Section:			
Depth From (TVD) (usft) 0.00	Phase: PLAN	Tie On Depth: 0.00	Direction (°) 193.70
+N-S (usft) 0.00	+E-W (usft) 0.00		

Survey Tool Program	Date 10/3/2016		
From (usft)	To (usft)	Survey (Wellbore)	Description
0.00	4,855.22 rev0 (Original hole)	MWD	MWD - Standard



Standard_Report

Company: Lime Rock Resources
Project: Eddy County, New Mexico NAD83
Site: Eagle 34K Federal
Well: Eagle 34K Federal Well No. 77
Wellbore: Original hole
Design: rev0

Local Co-ordinate Reference: Well Eagle 34K Federal Well No. 77
TVD Reference: RKB=3564.5+12.8 @ 3577.30ustf
MD Reference: RKB=3564.5+12.8 @ 3577.30ustf
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: DB Jul2216dt

Planned Survey	MD (ustf)	Inc (°)	Azi (azimuth) (°)	TVD (ustf)	NS (ustf)	EW (ustf)	DLeg (°/100ustf)	V. Sec (ustf)	North (ustf)	East (ustf)
KOP Begin 3°/100' build										
	0.00		0.00	0.00	0.00	0.00	0.00	0.00	651,664.25	561,693.50
	100.00		0.00	100.00	0.00	0.00	0.00	0.00	651,664.25	561,693.50
	200.00		0.00	200.00	0.00	0.00	0.00	0.00	651,664.25	561,693.50
	300.00		0.00	300.00	0.00	0.00	0.00	0.00	651,664.25	561,693.50
	400.00		0.00	400.00	0.00	0.00	0.00	0.00	651,664.25	561,693.50
	500.00		0.00	500.00	0.00	0.00	0.00	0.00	651,664.25	561,693.50
KOP Begin 3°/100' build										
	600.00	3.00	193.70	599.95	-2.54	-0.62	3.00	2.62	651,661.71	561,692.88
	700.00	6.00	193.70	699.63	-10.16	-2.48	3.00	10.46	651,654.09	561,691.02
	800.00	9.00	193.70	798.77	-22.84	-5.57	3.00	23.51	651,641.41	561,687.93
	900.00	12.00	193.70	897.08	-40.55	-9.88	3.00	41.74	651,623.70	561,683.62
	1,000.00	15.00	193.70	994.31	-63.23	-15.41	3.00	65.08	651,601.02	561,678.09
	1,100.00	18.00	193.70	1,090.18	-90.82	-22.13	3.00	93.48	651,573.43	561,671.37
	1,200.00	21.00	193.70	1,184.43	-123.25	-30.03	3.00	126.85	651,541.00	561,663.47
	1,203.24	21.10	193.70	1,187.46	-124.38	-30.31	3.00	128.02	651,539.87	561,663.19
Begin 21.10° tangent section										
	1,300.00	21.10	193.70	1,277.73	-158.21	-38.56	0.00	162.84	651,506.04	561,654.94
	1,400.00	21.10	193.70	1,371.03	-193.19	-47.08	0.00	198.84	651,471.06	561,646.42
	1,500.00	21.10	193.70	1,464.32	-228.16	-55.60	0.00	234.84	651,436.09	561,637.90
	1,600.00	21.10	193.70	1,557.62	-263.13	-64.12	0.00	270.83	651,401.12	561,629.38
	1,700.00	21.10	193.70	1,650.92	-298.10	-72.65	0.00	306.83	651,366.15	561,620.85
	1,800.00	21.10	193.70	1,744.22	-333.07	-81.17	0.00	342.82	651,331.18	561,612.33
	1,900.00	21.10	193.70	1,837.51	-368.05	-89.69	0.00	378.82	651,296.20	561,603.81
	2,000.00	21.10	193.70	1,930.81	-403.02	-98.21	0.00	414.81	651,261.23	561,595.29
	2,100.00	21.10	193.70	2,024.11	-437.99	-106.74	0.00	450.81	651,226.26	561,586.76
	2,200.00	21.10	193.70	2,117.40	-472.96	-115.26	0.00	486.80	651,191.29	561,578.24
	2,300.00	21.10	193.70	2,210.70	-507.93	-123.78	0.00	522.80	651,156.32	561,569.72



Standard_Report

Company: Lime Rock Resources
Project: Eddy County, New Mexico NAD83
Site: Eagle 34K Federal
Well: Eagle 34K Federal Well No. 77
Wellbore: Original hole
Design: rev0

Local Co-ordinate Reference: Well Eagle 34K Federal Well No. 77
TVD Reference: RKB=3564.5+12.8 @ 3577.30usft
MD Reference: RKB=3564.5+12.8 @ 3577.30usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: DB Jul2216dt

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Northing (usft)	Easting (usft)
2,301.97	21.10	193.70	2,212.54	-508.62	-123.95	0.00	523.51	651,155.63	561,569.55
Begin 3°/100' drop									
2,400.00	18.16	193.70	2,304.86	-540.61	-131.74	3.00	558.43	651,123.64	561,561.76
2,500.00	15.16	193.70	2,400.66	-568.46	-138.53	3.00	585.09	651,095.79	561,554.97
2,600.00	12.16	193.70	2,497.82	-591.39	-144.12	3.00	608.70	651,072.86	561,549.38
2,700.00	9.16	193.70	2,596.08	-609.36	-148.50	3.00	627.19	651,054.89	561,545.00
2,800.00	6.16	193.70	2,695.18	-622.30	-151.65	3.00	640.51	651,041.95	561,541.85
2,900.00	3.16	193.70	2,794.84	-630.18	-153.57	3.00	648.63	651,034.07	561,539.93
3,000.00	0.16	193.70	2,894.78	-632.99	-154.26	3.00	651.52	651,031.26	561,539.24
3,005.22	0.00	193.70	2,900.00	-633.00	-154.26	3.00	651.53	651,031.25	561,539.24
Begin vertical hold section									
3,100.00	0.00	0.00	2,994.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
3,200.00	0.00	0.00	3,094.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
3,300.00	0.00	0.00	3,194.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
3,400.00	0.00	0.00	3,294.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
3,500.00	0.00	0.00	3,394.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
3,600.00	0.00	0.00	3,494.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
3,700.00	0.00	0.00	3,594.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
3,800.00	0.00	0.00	3,694.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
3,900.00	0.00	0.00	3,794.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
4,000.00	0.00	0.00	3,894.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
4,100.00	0.00	0.00	3,994.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
4,200.00	0.00	0.00	4,094.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
4,300.00	0.00	0.00	4,194.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
4,400.00	0.00	0.00	4,294.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
4,500.00	0.00	0.00	4,394.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
4,600.00	0.00	0.00	4,494.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24



Standard_Report

Company:

Lime Rock Resources

Project:

Eddy County, New Mexico NAD83

Site:

Eagle 34K Federal

Eagle 34K Federal Well No. 77

Wellbore:

Original hole

Design:

rev0

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well Eagle 34K Federal Well No. 77

RKB=3564.5+12.8 @ 3577.30usft

RKB=3564.5+12.8 @ 3577.30usft

Grid

Minimum Curvature

DB Jul22 16dt

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	D Leg (°/100usft)	V. Sec (usft)	Northing (usft)	Easting (usft)
4,700.00	0.00	0.00	4,594.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
4,800.00	0.00	0.00	4,694.78	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24
4,855.22	0.00	0.00	4,750.00	-633.00	-154.26	0.00	651.53	651,031.25	561,539.24

PBHL/TD

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Dip (°)	Dip Direction (°)	Lithology
1,283.14	1,262.00	Grayburg	0.00		
3,113.22	3,008.00	Yeso	0.00		
311.00	311.00	Seven Rivers	0.00		
837.76	836.00	Queen	0.00		
75.00	75.00	Yates	0.00		
1,533.95	1,496.00	Premier	0.00		
4,403.22	4,298.00	Tubb	0.00		
3,005.22	2,900.00	Glorieta	0.00		
1,590.76	1,549.00	San Andres	0.00		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N-S (usft)	+E-W (usft)	Comment
500.00	500.00	0.00	0.00	KOP Begin 3°/100' build
1,203.24	1,187.46	-124.38	-30.31	Begin 21.10° tangent section
2,301.97	2,212.54	-508.62	-123.95	Begin 3°/100' drop
3,005.22	2,900.00	-633.00	-154.26	Begin vertical hold section
4,855.22	4,750.00	-633.00	-154.26	PBHL/TD