

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form C-101
August 1, 2011
Permit 272854

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address CENTENNIAL RESOURCE PRODUCTION, LLC 1001 17th Street, Suite 1800 Denver, CO 80202		2. OGRID Number 372165
4. Property Code 326135		3. API Number 30-025-46401
5. Property Name WINNEBAGO 30 STATE COM		6. Well No. 501H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
M	30	22S	35E	4	450	S	1070	W	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
D	19	22S	35E	1	100	N	330	W	Lea

9. Pool Information

OJO CHISO;BONE SPRING, SOUTH	97293
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3454
16. Multiple N	17. Proposed Depth 20632	18. Formation 2nd Bone Spring Sand	19. Contractor	20. Spud Date 12/16/2019
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	1800	1533	0
Int1	12.25	9.625	40	5600	1383	0
Prod	8.5	5.5	20	20632	2489	9946
Prod	8.75	5.5	20	10846	847	0

Casing/Cement Program: Additional Comments

Drill 8.75 hole size for the curve and 8.5 hole size for the lateral. for the 5.5 casing string ran for 8.75 & 8.5 holes as one string.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Pipe	10000	5000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable. Signature:	OIL CONSERVATION DIVISION
Printed Name: Electronically filed by Sarah Ferreyros	Approved By: Paul F Kautz
Title: Senior Regulatory Analyst	Title: Geologist
Email Address: Sarah.Ferreyros@cdevinc.com	Approved Date: 10/3/2019 Expiration Date: 10/3/2021
Date: 9/30/2019 Phone: 720-499-1454	Conditions of Approval Attached

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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 30-025-46401	² Pool Code 97293	³ Pool Name Ojo Chiso; Bone Spring, South
⁴ Property Code 326135	⁵ Property Name WINNEBAGO 30 STATE COM	⁶ Well Number 501H
⁷ OGRID No. 372165	⁸ Operator Name CENTENNIAL RESOURCE PRODUCTION, LLC	⁹ Elevation 3454.6'

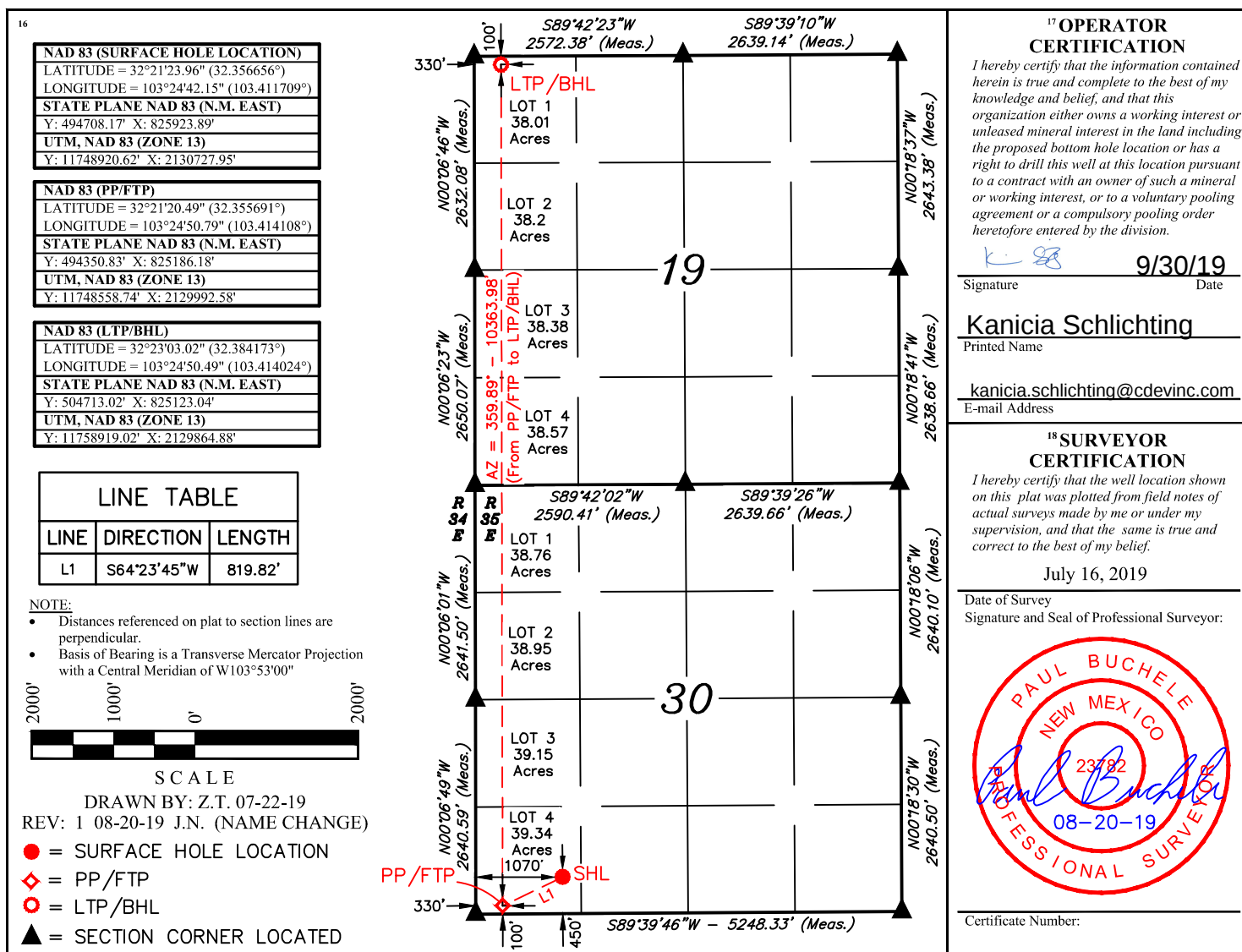
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	30	22S	35E		450	SOUTH	1070	WEST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	19	22S	35E		100	NORTH	330	WEST	LEA
¹² Dedicated Acres 309.36	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.



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GAS CAPTURE PLAN

Date: 10/3/2019

☒ Original

Operator & OGRID No.: [372165] CENTENNIAL RESOURCE PRODUCTION, LLC

☐ Amended - Reason for
Amendment: _____

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

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

Well(s)/Production Facility – Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
WINNEBAGO 30 STATE COM #501H	30-025-46401	M-30-22S-35E	0450S 1070W	1950	None	High and Low pressure line.

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to LUCID ENERGY DELAWARE, LLC and will be connected to LUCID ENERGY DELAWARE, LLC High Pressure gathering system located in Lea County, New Mexico. It will require 7537' of pipeline to connect the facility to High Pressure gathering system. CENTENNIAL RESOURCE PRODUCTION, LLC provides (periodically) to LUCID ENERGY DELAWARE, LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, CENTENNIAL RESOURCE PRODUCTION, LLC and LUCID ENERGY DELAWARE, LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at LUCID ENERGY DELAWARE, LLC Processing Plant located in Sec. 13, Twn. 24S, Rng. 33E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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

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Form APD Comments

Permit 272854

PERMIT COMMENTS

Operator Name and Address: CENTENNIAL RESOURCE PRODUCTION, LLC [372165] 1001 17th Street, Suite 1800 Denver, CO 80202		API Number: 30-025-46401
		Well: WINNEBAGO 30 STATE COM #501H
Created By	Comment	Comment Date
kcastillo	Spudder Rig will preset casing. C-102 and Additional Points Required will be emailed.	9/30/2019

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Form APD Conditions

Permit 272854

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

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: CENTENNIAL RESOURCE PRODUCTION, LLC [372165] 1001 17th Street, Suite 1800 Denver, CO 80202	API Number: 30-025-46401
	Well: WINNEBAGO 30 STATE COM #501H

OCD Reviewer	Condition
pkautz	Will require a directional survey with the C-104
pkautz	1) SURFACE & INTERMEDIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing --
pkautz	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement
pkautz	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
pkautz	1)- The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104
pkautz	It is the operator's responsibility to monitor cancellation dates of approved APDs. APD's are good for 2 years and may be extended for one year. Only one 1 year extension will be granted if submitted by C-103 before expiration date. After expiration date or after a 1 year extension must submit new APD. If an APD expires and if site construction has occurred, site remediation is required.
pkautz	Stage Tool 1) Must notify OCD Hobbs Office prior to running Stage Tool at 5753703186 2) If using Stage Tool on Surface casing, Stage Tool must be set greater than 350' from surface and a minimum of 200 feet above surface shoe. 3) When using a Stage Tool on Intermediate or Production Casing Stage must be a minimum of 50 feet below previous casing shoe.

NEW MEXICO

LEA

WINNEBAGO

WINNEBAGO 30 STATE COM 501H

WINNEBAGO 30 STATE COM 501H

Plan: PWP0

Survey Report - Geographic

03 September, 2019

LGC
Survey Report - Geographic

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well WINNEBAGO 30 STATE COM 501H
Project:	LEA	TVD Reference:	HP650 @ 3481.6usft (HP650 26.5+3455.1)
Site:	WINNEBAGO	MD Reference:	HP650 @ 3481.6usft (HP650 26.5+3455.1)
Well:	WINNEBAGO 30 STATE COM 501H	North Reference:	True
Wellbore:	WINNEBAGO 30 STATE COM 501H	Survey Calculation Method:	Minimum Curvature
Design:	PWP0	Database:	Centennial EDM SQL Server

Project	LEA		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	WINNEBAGO		
Site Position:		Northing:	0.00 usft
From:	Map	Easting:	0.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	0° 0' 0.000 N
		Longitude:	109° 29' 19.478 W
		Grid Convergence:	0.00 °

Well	WINNEBAGO 30 STATE COM 501H		
Well Position	+N/-S	0.0 usft	Northing: 11,748,920.62 usft
	+E/-W	0.0 usft	Easting: 2,130,727.95 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 21' 23.961 N
		Longitude:	103° 24' 42.153 W
		Ground Level:	3,455.1 usft

Wellbore	WINNEBAGO 30 STATE COM 501H		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF200510	12/31/2009	7.69
			Dip Angle
			(°)
			60.39
			Field Strength
			(nT)
			48,890.48644767

Design	PWP0		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			0.00

Survey Tool Program	Date	9/3/2019		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
0.0	20,632.1	PWP0 (WINNEBAGO 30 STATE COM 501	MWD+IFR1+MS	OWSG_Rev2_ MWD + IFR1 + Multi-Station Correction

Planned Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Map	Map	Latitude	Longitude
Depth	(°)	(°)	Depth	(usft)	(usft)	Northing	Easting		
(usft)			(usft)			(usft)	(usft)		
0.0	0.00	0.00	0.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
100.0	0.00	0.00	100.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
200.0	0.00	0.00	200.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
300.0	0.00	0.00	300.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
400.0	0.00	0.00	400.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
500.0	0.00	0.00	500.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
600.0	0.00	0.00	600.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
700.0	0.00	0.00	700.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
800.0	0.00	0.00	800.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
900.0	0.00	0.00	900.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W

LGC
Survey Report - Geographic

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well WINNEBAGO 30 STATE COM 501H
Project:	LEA	TVD Reference:	HP650 @ 3481.6usft (HP650 26.5+3455.1)
Site:	WINNEBAGO	MD Reference:	HP650 @ 3481.6usft (HP650 26.5+3455.1)
Well:	WINNEBAGO 30 STATE COM 501H	North Reference:	True
Wellbore:	WINNEBAGO 30 STATE COM 501H	Survey Calculation Method:	Minimum Curvature
Design:	PWPO	Database:	Centennial EDM SQL Server

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,200.0	0.00	0.00	1,200.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
2,000.0	0.00	0.00	2,000.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
2,100.0	0.00	0.00	2,100.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
2,200.0	0.00	0.00	2,200.0	0.0	0.0	11,748,920.62	2,130,727.95	32° 21' 23.961 N	103° 24' 42.153 W
2,300.0	1.00	244.50	2,300.0	-0.4	-0.8	11,748,920.24	2,130,727.17	32° 21' 23.957 N	103° 24' 42.162 W
2,400.0	2.00	244.50	2,400.0	-1.5	-3.2	11,748,919.07	2,130,724.82	32° 21' 23.946 N	103° 24' 42.189 W
2,500.0	3.00	244.50	2,499.9	-3.4	-7.1	11,748,917.14	2,130,720.91	32° 21' 23.927 N	103° 24' 42.235 W
2,600.0	4.00	244.50	2,599.7	-6.0	-12.6	11,748,914.43	2,130,715.44	32° 21' 23.901 N	103° 24' 42.299 W
2,700.0	5.00	244.50	2,699.4	-9.4	-19.7	11,748,910.95	2,130,708.41	32° 21' 23.868 N	103° 24' 42.382 W
2,800.0	6.00	244.50	2,798.9	-13.5	-28.3	11,748,906.69	2,130,699.82	32° 21' 23.827 N	103° 24' 42.483 W
2,900.0	7.00	244.50	2,898.3	-18.4	-38.5	11,748,901.67	2,130,689.68	32° 21' 23.779 N	103° 24' 42.602 W
3,000.0	8.00	244.50	2,997.4	-24.0	-50.3	11,748,895.87	2,130,677.98	32° 21' 23.723 N	103° 24' 42.739 W
3,100.0	9.00	244.50	3,096.3	-30.4	-63.7	11,748,889.31	2,130,664.74	32° 21' 23.660 N	103° 24' 42.895 W
3,200.0	10.00	244.50	3,194.9	-37.5	-78.6	11,748,881.99	2,130,649.95	32° 21' 23.590 N	103° 24' 43.069 W
3,250.0	10.50	244.50	3,244.1	-41.3	-86.6	11,748,878.04	2,130,641.97	32° 21' 23.552 N	103° 24' 43.162 W
3,300.0	10.50	244.50	3,293.3	-45.2	-94.8	11,748,873.99	2,130,633.81	32° 21' 23.513 N	103° 24' 43.258 W
3,400.0	10.50	244.50	3,391.6	-53.1	-111.3	11,748,865.90	2,130,617.48	32° 21' 23.435 N	103° 24' 43.450 W
3,500.0	10.50	244.50	3,489.9	-60.9	-127.7	11,748,857.82	2,130,601.15	32° 21' 23.358 N	103° 24' 43.642 W
3,600.0	10.50	244.50	3,588.3	-68.8	-144.2	11,748,849.73	2,130,584.82	32° 21' 23.280 N	103° 24' 43.833 W
3,700.0	10.50	244.50	3,686.6	-76.6	-160.6	11,748,841.64	2,130,568.49	32° 21' 23.202 N	103° 24' 44.025 W
3,800.0	10.50	244.50	3,784.9	-84.5	-177.1	11,748,833.55	2,130,552.16	32° 21' 23.125 N	103° 24' 44.217 W
3,900.0	10.50	244.50	3,883.2	-92.3	-193.5	11,748,825.46	2,130,535.83	32° 21' 23.047 N	103° 24' 44.409 W
4,000.0	10.50	244.50	3,981.6	-100.1	-210.0	11,748,817.37	2,130,519.50	32° 21' 22.969 N	103° 24' 44.600 W
4,100.0	10.50	244.50	4,079.9	-108.0	-226.4	11,748,809.28	2,130,503.17	32° 21' 22.892 N	103° 24' 44.792 W
4,200.0	10.50	244.50	4,178.2	-115.8	-242.9	11,748,801.20	2,130,486.84	32° 21' 22.814 N	103° 24' 44.984 W
4,300.0	10.50	244.50	4,276.6	-123.7	-259.3	11,748,793.11	2,130,470.51	32° 21' 22.737 N	103° 24' 45.176 W
4,400.0	10.50	244.50	4,374.9	-131.5	-275.8	11,748,785.02	2,130,454.18	32° 21' 22.659 N	103° 24' 45.368 W
4,500.0	10.50	244.50	4,473.2	-139.4	-292.2	11,748,776.93	2,130,437.85	32° 21' 22.581 N	103° 24' 45.559 W
4,600.0	10.50	244.50	4,571.5	-147.2	-308.6	11,748,768.84	2,130,421.52	32° 21' 22.504 N	103° 24' 45.751 W
4,700.0	10.50	244.50	4,669.9	-155.1	-325.1	11,748,760.75	2,130,405.19	32° 21' 22.426 N	103° 24' 45.943 W
4,800.0	10.50	244.50	4,768.2	-162.9	-341.5	11,748,752.66	2,130,388.86	32° 21' 22.348 N	103° 24' 46.135 W
4,900.0	10.50	244.50	4,866.5	-170.8	-358.0	11,748,744.58	2,130,372.53	32° 21' 22.271 N	103° 24' 46.326 W
5,000.0	10.50	244.50	4,964.8	-178.6	-374.4	11,748,736.49	2,130,356.20	32° 21' 22.193 N	103° 24' 46.518 W
5,100.0	10.50	244.50	5,063.2	-186.4	-390.9	11,748,728.40	2,130,339.87	32° 21' 22.115 N	103° 24' 46.710 W
5,200.0	10.50	244.50	5,161.5	-194.3	-407.3	11,748,720.31	2,130,323.54	32° 21' 22.038 N	103° 24' 46.902 W
5,300.0	10.50	244.50	5,259.8	-202.1	-423.8	11,748,712.22	2,130,307.21	32° 21' 21.960 N	103° 24' 47.093 W
5,400.0	10.50	244.50	5,358.1	-210.0	-440.2	11,748,704.13	2,130,290.88	32° 21' 21.882 N	103° 24' 47.285 W
5,500.0	10.50	244.50	5,456.5	-217.8	-456.7	11,748,696.04	2,130,274.55	32° 21' 21.805 N	103° 24' 47.477 W
5,600.0	10.50	244.50	5,554.8	-225.7	-473.1	11,748,687.95	2,130,258.22	32° 21' 21.727 N	103° 24' 47.669 W
5,700.0	10.50	244.50	5,653.1	-233.5	-489.6	11,748,679.87	2,130,241.89	32° 21' 21.650 N	103° 24' 47.861 W
5,800.0	10.50	244.50	5,751.4	-241.4	-506.0	11,748,671.78	2,130,225.56	32° 21' 21.572 N	103° 24' 48.052 W
5,900.0	10.50	244.50	5,849.8	-249.2	-522.5	11,748,663.69	2,130,209.23	32° 21' 21.494 N	103° 24' 48.244 W
6,000.0	10.50	244.50	5,948.1	-257.1	-538.9	11,748,655.60	2,130,192.90	32° 21' 21.417 N	103° 24' 48.436 W
6,100.0	10.50	244.50	6,046.4	-264.9	-555.4	11,748,647.51	2,130,176.57	32° 21' 21.339 N	103° 24' 48.628 W
6,200.0	10.50	244.50	6,144.7	-272.7	-571.8	11,748,639.42	2,130,160.24	32° 21' 21.261 N	103° 24' 48.819 W
6,300.0	10.50	244.50	6,243.1	-280.6	-588.3	11,748,631.33	2,130,143.91	32° 21' 21.184 N	103° 24' 49.011 W
6,400.0	10.50	244.50	6,341.4	-288.4	-604.7	11,748,623.25	2,130,127.58	32° 21' 21.106 N	103° 24' 49.203 W
6,500.0	10.50	244.50	6,439.7	-296.3	-621.2	11,748,615.16	2,130,111.25	32° 21' 21.028 N	103° 24' 49.395 W

LGC
Survey Report - Geographic

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well WINNEBAGO 30 STATE COM 501H
Project:	LEA	TVD Reference:	HP650 @ 3481.6usft (HP650 26.5+3455.1)
Site:	WINNEBAGO	MD Reference:	HP650 @ 3481.6usft (HP650 26.5+3455.1)
Well:	WINNEBAGO 30 STATE COM 501H	North Reference:	True
Wellbore:	WINNEBAGO 30 STATE COM 501H	Survey Calculation Method:	Minimum Curvature
Design:	PWPO	Database:	Centennial EDM SQL Server

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,600.0	10.50	244.50	6,538.0	-304.1	-637.6	11,748,607.07	2,130,094.92	32° 21' 20.951 N	103° 24' 49.586 W
6,650.0	10.50	244.50	6,587.2	-308.0	-645.8	11,748,603.02	2,130,086.75	32° 21' 20.912 N	103° 24' 49.682 W
6,700.0	10.00	244.50	6,636.4	-311.9	-653.9	11,748,599.07	2,130,078.78	32° 21' 20.874 N	103° 24' 49.776 W
6,800.0	9.00	244.50	6,735.0	-319.0	-668.8	11,748,591.75	2,130,063.99	32° 21' 20.804 N	103° 24' 49.950 W
6,900.0	8.00	244.50	6,833.9	-325.3	-682.1	11,748,585.19	2,130,050.74	32° 21' 20.741 N	103° 24' 50.105 W
7,000.0	7.00	244.50	6,933.1	-331.0	-693.9	11,748,579.39	2,130,039.05	32° 21' 20.685 N	103° 24' 50.243 W
7,100.0	6.00	244.50	7,032.4	-335.8	-704.1	11,748,574.37	2,130,028.90	32° 21' 20.637 N	103° 24' 50.362 W
7,200.0	5.00	244.50	7,132.0	-340.0	-712.8	11,748,570.12	2,130,020.32	32° 21' 20.596 N	103° 24' 50.463 W
7,300.0	4.00	244.50	7,231.7	-343.3	-719.8	11,748,566.63	2,130,013.28	32° 21' 20.563 N	103° 24' 50.545 W
7,400.0	3.00	244.50	7,331.5	-346.0	-725.3	11,748,563.92	2,130,007.81	32° 21' 20.537 N	103° 24' 50.609 W
7,500.0	2.00	244.50	7,431.4	-347.9	-729.3	11,748,561.99	2,130,003.91	32° 21' 20.518 N	103° 24' 50.655 W
7,600.0	1.00	244.50	7,531.3	-349.0	-731.6	11,748,560.83	2,130,001.56	32° 21' 20.507 N	103° 24' 50.683 W
7,700.0	0.00	0.00	7,631.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
7,800.0	0.00	0.00	7,731.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
7,900.0	0.00	0.00	7,831.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
8,000.0	0.00	0.00	7,931.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
8,100.0	0.00	0.00	8,031.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
8,200.0	0.00	0.00	8,131.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
8,300.0	0.00	0.00	8,231.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
8,400.0	0.00	0.00	8,331.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
8,500.0	0.00	0.00	8,431.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
8,600.0	0.00	0.00	8,531.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
8,700.0	0.00	0.00	8,631.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
8,800.0	0.00	0.00	8,731.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
8,900.0	0.00	0.00	8,831.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
9,000.0	0.00	0.00	8,931.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
9,100.0	0.00	0.00	9,031.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
9,200.0	0.00	0.00	9,131.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
9,300.0	0.00	0.00	9,231.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
9,400.0	0.00	0.00	9,331.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
9,500.0	0.00	0.00	9,431.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
9,600.0	0.00	0.00	9,531.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
9,700.0	0.00	0.00	9,631.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
9,800.0	0.00	0.00	9,731.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
9,900.0	0.00	0.00	9,831.3	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
9,945.5	0.00	0.00	9,876.8	-349.4	-732.4	11,748,560.44	2,130,000.78	32° 21' 20.503 N	103° 24' 50.692 W
10,000.0	5.45	0.10	9,931.2	-346.8	-732.4	11,748,563.03	2,130,000.74	32° 21' 20.529 N	103° 24' 50.692 W
10,100.0	15.44	0.10	10,029.5	-328.7	-732.4	11,748,581.13	2,130,000.51	32° 21' 20.708 N	103° 24' 50.692 W
10,200.0	25.44	0.10	10,123.1	-293.8	-732.3	11,748,616.01	2,130,000.05	32° 21' 21.053 N	103° 24' 50.691 W
10,300.0	35.44	0.10	10,209.2	-243.2	-732.2	11,748,666.61	2,129,999.39	32° 21' 21.554 N	103° 24' 50.690 W
10,400.0	45.43	0.10	10,285.2	-178.4	-732.1	11,748,731.38	2,129,998.54	32° 21' 22.195 N	103° 24' 50.689 W
10,500.0	55.43	0.10	10,348.8	-101.4	-732.0	11,748,808.36	2,129,997.53	32° 21' 22.957 N	103° 24' 50.687 W
10,600.0	65.43	0.10	10,398.1	-14.5	-731.9	11,748,895.22	2,129,996.39	32° 21' 23.816 N	103° 24' 50.685 W
10,700.0	75.42	0.10	10,431.5	79.6	-731.7	11,748,989.31	2,129,995.16	32° 21' 24.748 N	103° 24' 50.683 W
10,800.0	85.42	0.10	10,448.2	178.0	-731.5	11,749,087.78	2,129,993.87	32° 21' 25.722 N	103° 24' 50.681 W
10,845.8	90.00	0.10	10,450.0	223.8	-731.4	11,749,133.56	2,129,993.27	32° 21' 26.175 N	103° 24' 50.680 W
10,900.0	90.00	0.10	10,450.0	278.0	-731.3	11,749,187.72	2,129,992.56	32° 21' 26.711 N	103° 24' 50.679 W
11,000.0	90.00	0.10	10,450.0	378.0	-731.2	11,749,287.71	2,129,991.25	32° 21' 27.701 N	103° 24' 50.677 W
11,100.0	90.00	0.10	10,450.0	478.0	-731.0	11,749,387.71	2,129,989.94	32° 21' 28.691 N	103° 24' 50.675 W
11,200.0	90.00	0.10	10,450.0	578.0	-730.8	11,749,487.70	2,129,988.63	32° 21' 29.680 N	103° 24' 50.673 W
11,300.0	90.00	0.10	10,450.0	678.0	-730.6	11,749,587.69	2,129,987.33	32° 21' 30.670 N	103° 24' 50.671 W
11,400.0	90.00	0.10	10,450.0	778.0	-730.5	11,749,687.68	2,129,986.02	32° 21' 31.660 N	103° 24' 50.669 W
11,500.0	90.00	0.10	10,450.0	878.0	-730.3	11,749,787.67	2,129,984.71	32° 21' 32.649 N	103° 24' 50.667 W
11,600.0	90.00	0.10	10,450.0	978.0	-730.1	11,749,887.66	2,129,983.40	32° 21' 33.639 N	103° 24' 50.665 W
11,700.0	90.00	0.10	10,450.0	1,078.0	-729.9	11,749,987.65	2,129,982.09	32° 21' 34.628 N	103° 24' 50.663 W

LGC
Survey Report - Geographic

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well WINNEBAGO 30 STATE COM 501H
Project:	LEA	TVD Reference:	HP650 @ 3481.6usft (HP650 26.5+3455.1)
Site:	WINNEBAGO	MD Reference:	HP650 @ 3481.6usft (HP650 26.5+3455.1)
Well:	WINNEBAGO 30 STATE COM 501H	North Reference:	True
Wellbore:	WINNEBAGO 30 STATE COM 501H	Survey Calculation Method:	Minimum Curvature
Design:	PWPO	Database:	Centennial EDM SQL Server

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,800.0	90.00	0.10	10,450.0	1,178.0	-729.8	11,750,087.65	2,129,980.78	32° 21' 35.618 N	103° 24' 50.661 W
11,900.0	90.00	0.10	10,450.0	1,278.0	-729.6	11,750,187.64	2,129,979.47	32° 21' 36.608 N	103° 24' 50.659 W
12,000.0	90.00	0.10	10,450.0	1,378.0	-729.4	11,750,287.63	2,129,978.16	32° 21' 37.597 N	103° 24' 50.657 W
12,100.0	90.00	0.10	10,450.0	1,478.0	-729.2	11,750,387.62	2,129,976.85	32° 21' 38.587 N	103° 24' 50.655 W
12,200.0	90.00	0.10	10,450.0	1,578.0	-729.1	11,750,487.61	2,129,975.54	32° 21' 39.576 N	103° 24' 50.653 W
12,300.0	90.00	0.10	10,450.0	1,678.0	-728.9	11,750,587.60	2,129,974.23	32° 21' 40.566 N	103° 24' 50.651 W
12,400.0	90.00	0.10	10,450.0	1,778.0	-728.7	11,750,687.59	2,129,972.92	32° 21' 41.556 N	103° 24' 50.649 W
12,500.0	90.00	0.10	10,450.0	1,878.0	-728.5	11,750,787.59	2,129,971.61	32° 21' 42.545 N	103° 24' 50.647 W
12,600.0	90.00	0.10	10,450.0	1,978.0	-728.4	11,750,887.58	2,129,970.30	32° 21' 43.535 N	103° 24' 50.645 W
12,700.0	90.00	0.10	10,450.0	2,078.0	-728.2	11,750,987.57	2,129,968.99	32° 21' 44.525 N	103° 24' 50.643 W
12,800.0	90.00	0.10	10,450.0	2,178.0	-728.0	11,751,087.56	2,129,967.68	32° 21' 45.514 N	103° 24' 50.641 W
12,900.0	90.00	0.10	10,450.0	2,278.0	-727.8	11,751,187.55	2,129,966.37	32° 21' 46.504 N	103° 24' 50.639 W
13,000.0	90.00	0.10	10,450.0	2,378.0	-727.7	11,751,287.54	2,129,965.07	32° 21' 47.493 N	103° 24' 50.637 W
13,100.0	90.00	0.10	10,450.0	2,478.0	-727.5	11,751,387.53	2,129,963.76	32° 21' 48.483 N	103° 24' 50.635 W
13,200.0	90.00	0.10	10,450.0	2,578.0	-727.3	11,751,487.53	2,129,962.45	32° 21' 49.473 N	103° 24' 50.633 W
13,300.0	90.00	0.10	10,450.0	2,678.0	-727.2	11,751,587.52	2,129,961.14	32° 21' 50.462 N	103° 24' 50.631 W
13,400.0	90.00	0.10	10,450.0	2,778.0	-727.0	11,751,687.51	2,129,959.83	32° 21' 51.452 N	103° 24' 50.629 W
13,500.0	90.00	0.10	10,450.0	2,878.0	-726.8	11,751,787.50	2,129,958.52	32° 21' 52.441 N	103° 24' 50.627 W
13,600.0	90.00	0.10	10,450.0	2,978.0	-726.6	11,751,887.49	2,129,957.21	32° 21' 53.431 N	103° 24' 50.625 W
13,700.0	90.00	0.10	10,450.0	3,078.0	-726.5	11,751,987.48	2,129,955.90	32° 21' 54.421 N	103° 24' 50.623 W
13,800.0	90.00	0.10	10,450.0	3,178.0	-726.3	11,752,087.47	2,129,954.59	32° 21' 55.410 N	103° 24' 50.621 W
13,900.0	90.00	0.10	10,450.0	3,278.0	-726.1	11,752,187.47	2,129,953.28	32° 21' 56.400 N	103° 24' 50.619 W
14,000.0	90.00	0.10	10,450.0	3,378.0	-725.9	11,752,287.46	2,129,951.97	32° 21' 57.390 N	103° 24' 50.617 W
14,100.0	90.00	0.10	10,450.0	3,478.0	-725.8	11,752,387.45	2,129,950.66	32° 21' 58.379 N	103° 24' 50.615 W
14,200.0	90.00	0.10	10,450.0	3,578.0	-725.6	11,752,487.44	2,129,949.35	32° 21' 59.369 N	103° 24' 50.613 W
14,300.0	90.00	0.10	10,450.0	3,678.0	-725.4	11,752,587.43	2,129,948.04	32° 22' 0.358 N	103° 24' 50.611 W
14,400.0	90.00	0.10	10,450.0	3,778.0	-725.2	11,752,687.42	2,129,946.73	32° 22' 1.348 N	103° 24' 50.609 W
14,500.0	90.00	0.10	10,450.0	3,878.0	-725.1	11,752,787.41	2,129,945.42	32° 22' 2.338 N	103° 24' 50.607 W
14,600.0	90.00	0.10	10,450.0	3,978.0	-724.9	11,752,887.41	2,129,944.11	32° 22' 3.327 N	103° 24' 50.605 W
14,700.0	90.00	0.10	10,450.0	4,078.0	-724.7	11,752,987.40	2,129,942.81	32° 22' 4.317 N	103° 24' 50.603 W
14,800.0	90.00	0.10	10,450.0	4,178.0	-724.5	11,753,087.39	2,129,941.50	32° 22' 5.307 N	103° 24' 50.601 W
14,900.0	90.00	0.10	10,450.0	4,278.0	-724.4	11,753,187.38	2,129,940.19	32° 22' 6.296 N	103° 24' 50.599 W
15,000.0	90.00	0.10	10,450.0	4,378.0	-724.2	11,753,287.37	2,129,938.88	32° 22' 7.286 N	103° 24' 50.597 W
15,100.0	90.00	0.10	10,450.0	4,478.0	-724.0	11,753,387.36	2,129,937.57	32° 22' 8.275 N	103° 24' 50.595 W
15,200.0	90.00	0.10	10,450.0	4,578.0	-723.8	11,753,487.35	2,129,936.26	32° 22' 9.265 N	103° 24' 50.593 W
15,300.0	90.00	0.10	10,450.0	4,678.0	-723.7	11,753,587.35	2,129,934.95	32° 22' 10.255 N	103° 24' 50.591 W
15,400.0	90.00	0.10	10,450.0	4,778.0	-723.5	11,753,687.34	2,129,933.64	32° 22' 11.244 N	103° 24' 50.589 W
15,500.0	90.00	0.10	10,450.0	4,878.0	-723.3	11,753,787.33	2,129,932.33	32° 22' 12.234 N	103° 24' 50.587 W
15,600.0	90.00	0.10	10,450.0	4,978.0	-723.1	11,753,887.32	2,129,931.02	32° 22' 13.223 N	103° 24' 50.585 W
15,700.0	90.00	0.10	10,450.0	5,078.0	-723.0	11,753,987.31	2,129,929.71	32° 22' 14.213 N	103° 24' 50.583 W
15,800.0	90.00	0.10	10,450.0	5,178.0	-722.8	11,754,087.30	2,129,928.40	32° 22' 15.203 N	103° 24' 50.581 W
15,900.0	90.00	0.10	10,450.0	5,278.0	-722.6	11,754,187.29	2,129,927.09	32° 22' 16.192 N	103° 24' 50.579 W
16,000.0	90.00	0.10	10,450.0	5,378.0	-722.4	11,754,287.29	2,129,925.78	32° 22' 17.182 N	103° 24' 50.577 W
16,100.0	90.00	0.10	10,450.0	5,478.0	-722.3	11,754,387.28	2,129,924.47	32° 22' 18.172 N	103° 24' 50.575 W
16,200.0	90.00	0.10	10,450.0	5,578.0	-722.1	11,754,487.27	2,129,923.16	32° 22' 19.161 N	103° 24' 50.573 W
16,300.0	90.00	0.10	10,450.0	5,678.0	-721.9	11,754,587.26	2,129,921.85	32° 22' 20.151 N	103° 24' 50.571 W
16,400.0	90.00	0.10	10,450.0	5,778.0	-721.7	11,754,687.25	2,129,920.55	32° 22' 21.140 N	103° 24' 50.569 W
16,500.0	90.00	0.10	10,450.0	5,878.0	-721.6	11,754,787.24	2,129,919.24	32° 22' 22.130 N	103° 24' 50.567 W
16,600.0	90.00	0.10	10,450.0	5,978.0	-721.4	11,754,887.23	2,129,917.93	32° 22' 23.120 N	103° 24' 50.565 W
16,700.0	90.00	0.10	10,450.0	6,078.0	-721.2	11,754,987.23	2,129,916.62	32° 22' 24.109 N	103° 24' 50.563 W
16,800.0	90.00	0.10	10,450.0	6,178.0	-721.0	11,755,087.22	2,129,915.31	32° 22' 25.099 N	103° 24' 50.561 W
16,900.0	90.00	0.10	10,450.0	6,278.0	-720.9	11,755,187.21	2,129,914.00	32° 22' 26.088 N	103° 24' 50.559 W
17,000.0	90.00	0.10	10,450.0	6,378.0	-720.7	11,755,287.20	2,129,912.69	32° 22' 27.078 N	103° 24' 50.557 W
17,100.0	90.00	0.10	10,450.0	6,478.0	-720.5	11,755,387.19	2,129,911.38	32° 22' 28.068 N	103° 24' 50.555 W
17,200.0	90.00	0.10	10,450.0	6,578.0	-720.3	11,755,487.18	2,129,910.07	32° 22' 29.057 N	103° 24' 50.553 W

LGC
Survey Report - Geographic

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well WINNEBAGO 30 STATE COM 501H
Project:	LEA	TVD Reference:	HP650 @ 3481.6usft (HP650 26.5+3455.1)
Site:	WINNEBAGO	MD Reference:	HP650 @ 3481.6usft (HP650 26.5+3455.1)
Well:	WINNEBAGO 30 STATE COM 501H	North Reference:	True
Wellbore:	WINNEBAGO 30 STATE COM 501H	Survey Calculation Method:	Minimum Curvature
Design:	PWPO	Database:	Centennial EDM SQL Server

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
17,300.0	90.00	0.10	10,450.0	6,678.0	-720.2	11,755,587.17	2,129,908.76	32° 22' 30.047 N	103° 24' 50.551 W
17,400.0	90.00	0.10	10,450.0	6,778.0	-720.0	11,755,687.17	2,129,907.45	32° 22' 31.037 N	103° 24' 50.549 W
17,500.0	90.00	0.10	10,450.0	6,878.0	-719.8	11,755,787.16	2,129,906.14	32° 22' 32.026 N	103° 24' 50.547 W
17,600.0	90.00	0.10	10,450.0	6,978.0	-719.6	11,755,887.15	2,129,904.83	32° 22' 33.016 N	103° 24' 50.544 W
17,700.0	90.00	0.10	10,450.0	7,078.0	-719.5	11,755,987.14	2,129,903.52	32° 22' 34.005 N	103° 24' 50.542 W
17,800.0	90.00	0.10	10,450.0	7,178.0	-719.3	11,756,087.13	2,129,902.21	32° 22' 34.995 N	103° 24' 50.540 W
17,900.0	90.00	0.10	10,450.0	7,278.0	-719.1	11,756,187.12	2,129,900.90	32° 22' 35.985 N	103° 24' 50.538 W
18,000.0	90.00	0.10	10,450.0	7,378.0	-718.9	11,756,287.11	2,129,899.59	32° 22' 36.974 N	103° 24' 50.536 W
18,100.0	90.00	0.10	10,450.0	7,478.0	-718.8	11,756,387.11	2,129,898.29	32° 22' 37.964 N	103° 24' 50.534 W
18,200.0	90.00	0.10	10,450.0	7,578.0	-718.6	11,756,487.10	2,129,896.98	32° 22' 38.953 N	103° 24' 50.532 W
18,300.0	90.00	0.10	10,450.0	7,678.0	-718.4	11,756,587.09	2,129,895.67	32° 22' 39.943 N	103° 24' 50.530 W
18,400.0	90.00	0.10	10,450.0	7,778.0	-718.2	11,756,687.08	2,129,894.36	32° 22' 40.933 N	103° 24' 50.528 W
18,500.0	90.00	0.10	10,450.0	7,878.0	-718.1	11,756,787.07	2,129,893.05	32° 22' 41.922 N	103° 24' 50.526 W
18,600.0	90.00	0.10	10,450.0	7,978.0	-717.9	11,756,887.06	2,129,891.74	32° 22' 42.912 N	103° 24' 50.524 W
18,700.0	90.00	0.10	10,450.0	8,078.0	-717.7	11,756,987.05	2,129,890.43	32° 22' 43.902 N	103° 24' 50.522 W
18,800.0	90.00	0.10	10,450.0	8,178.0	-717.6	11,757,087.05	2,129,889.12	32° 22' 44.891 N	103° 24' 50.520 W
18,900.0	90.00	0.10	10,450.0	8,278.0	-717.4	11,757,187.04	2,129,887.81	32° 22' 45.881 N	103° 24' 50.518 W
19,000.0	90.00	0.10	10,450.0	8,378.0	-717.2	11,757,287.03	2,129,886.50	32° 22' 46.870 N	103° 24' 50.516 W
19,100.0	90.00	0.10	10,450.0	8,478.0	-717.0	11,757,387.02	2,129,885.19	32° 22' 47.860 N	103° 24' 50.514 W
19,200.0	90.00	0.10	10,450.0	8,578.0	-716.9	11,757,487.01	2,129,883.88	32° 22' 48.850 N	103° 24' 50.512 W
19,300.0	90.00	0.10	10,450.0	8,678.0	-716.7	11,757,587.00	2,129,882.57	32° 22' 49.839 N	103° 24' 50.510 W
19,400.0	90.00	0.10	10,450.0	8,778.0	-716.5	11,757,686.99	2,129,881.26	32° 22' 50.829 N	103° 24' 50.508 W
19,500.0	90.00	0.10	10,450.0	8,878.0	-716.3	11,757,786.99	2,129,879.95	32° 22' 51.818 N	103° 24' 50.506 W
19,600.0	90.00	0.10	10,450.0	8,978.0	-716.2	11,757,886.98	2,129,878.64	32° 22' 52.808 N	103° 24' 50.504 W
19,700.0	90.00	0.10	10,450.0	9,078.0	-716.0	11,757,986.97	2,129,877.33	32° 22' 53.798 N	103° 24' 50.502 W
19,800.0	90.00	0.10	10,450.0	9,178.0	-715.8	11,758,086.96	2,129,876.03	32° 22' 54.787 N	103° 24' 50.500 W
19,900.0	90.00	0.10	10,450.0	9,278.0	-715.6	11,758,186.95	2,129,874.72	32° 22' 55.777 N	103° 24' 50.498 W
20,000.0	90.00	0.10	10,450.0	9,378.0	-715.5	11,758,286.94	2,129,873.41	32° 22' 56.767 N	103° 24' 50.496 W
20,100.0	90.00	0.10	10,450.0	9,478.0	-715.3	11,758,386.93	2,129,872.10	32° 22' 57.756 N	103° 24' 50.494 W
20,200.0	90.00	0.10	10,450.0	9,578.0	-715.1	11,758,486.93	2,129,870.79	32° 22' 58.746 N	103° 24' 50.492 W
20,300.0	90.00	0.10	10,450.0	9,678.0	-714.9	11,758,586.92	2,129,869.48	32° 22' 59.735 N	103° 24' 50.490 W
20,400.0	90.00	0.10	10,450.0	9,778.0	-714.8	11,758,686.91	2,129,868.17	32° 23' 0.725 N	103° 24' 50.488 W
20,500.0	90.00	0.10	10,450.0	9,878.0	-714.6	11,758,786.90	2,129,866.86	32° 23' 1.715 N	103° 24' 50.486 W
20,600.0	90.00	0.10	10,450.0	9,978.0	-714.4	11,758,886.89	2,129,865.55	32° 23' 2.704 N	103° 24' 50.484 W
20,632.1	90.00	0.10	10,450.0	10,010.1	-714.4	11,758,919.03	2,129,865.13	32° 23' 3.022 N	103° 24' 50.483 W

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP/BHL - WINNEBAGC - hit/miss target - Shape	0.00	0.00	10,450.0	10,010.1	-714.6	11,758,919.02	2,129,864.88	32° 23' 3.022 N	103° 24' 50.486 W
- plan misses target center by 0.3usft at 20632.1usft MD (10450.0 TVD, 10010.1 N, -714.4 E)									
- Point									
FTP - WINNEBAGO 30 : - plan misses target center by 238.8usft at 10400.0usft MD (10285.2 TVD, -178.4 N, -732.1 E)	0.00	0.00	10,450.0	-350.9	-740.7	11,748,558.74	2,129,992.58	32° 21' 20.488 N	103° 24' 50.788 W
- Circle (radius 50.0)									

LGC

Survey Report - Geographic

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well WINNEBAGO 30 STATE COM 501H
Project:	LEA	TVD Reference:	HP650 @ 3481.6usft (HP650 26.5+3455.1)
Site:	WINNEBAGO	MD Reference:	HP650 @ 3481.6usft (HP650 26.5+3455.1)
Well:	WINNEBAGO 30 STATE COM 501H	North Reference:	True
Wellbore:	WINNEBAGO 30 STATE COM 501H	Survey Calculation Method:	Minimum Curvature
Design:	PWPO	Database:	Centennial EDM SQL Server

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,800.0	1,800.0	13 3/8"	13-3/8	17-1/2
5,646.0	5,600.0	9 5/8"	9-5/8	12-1/4
20,632.1	10,450.0	5 1/2"	5-1/2	8-1/2

Checked By: _____ Approved By: _____ Date: _____

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number