HOBBS OCD

ATS-16-927

OCD Hobbs

JUN 28 2016

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Form 3160-3
(August 2007)

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM 132953

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
Duo Sonic 29 Federal #104H (316013)

2. Name of Operator Endurance Resources, LLC (270329)

9. API Well No.
30-025-43327

3a. Address 203 West Wall Suite 1000
Midland, Tx 79701

3b. Phone No. *(include area code)*
432-242-4680

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10. Field and Pool, or Exploratory
WC-025 G-05 S263523H; DEL (97779)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface 325' FSL & 610' FEL

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11. Sec., T. R. M. or Blk. and Survey or Area
Sec 29-25s-35e

At proposed prod. zone 330' FNL & 660' FEL

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14. Distance in miles and direction from nearest town or post office*
11 miles Northwest of Jal, New Mexico

12. County or Parish
Lea

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
150'	480 ac	160 ac
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
1320'	MD: 13412' TVD: 9034'	NMB001200
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3219.7' GL	09/01/2016	45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
Tinlee Tilton	Tinlee Tilton	03/15/2016

Title
Drilling Engineer

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
James A. Amos		JUN 20 2016
Title	**Office**	
FIELD MANAGER	CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. S
States any false, fictitious or fraudulent stateme

See attached NMOCD
Conditions of Approval

fully to make to any department or agency of the United

(Continued on page 2)

*(Instructions on page 2)

KZ 06/29/16

Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

KZ

ENDURANCE
RESOURCES, LLC

Endurance Resources LLC

DRILLING & OPERATIONS PROGRAM

Duo Sonic 29 Fed 104H
SHL: 325' FSL & 610' FEL
Sec 29-25S-35E
BHL: 330' FNL & 660' FEL
Sec 29-25S-35E
Lea Co, NM

1. Geological Name of Surface Formation
   Quaternary

2. Estimated Tops of Important Geological Markers

Fresh Water	400'
Rustler	1003'
Top of Salt	1,538'
Lamar Limestone	5,252'
Delaware	5,277' - Oil
Brushy canyon	7,819' - Oil

   TVD: 9,034'; MD: 13,412'

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas
   The estimated depths at which water, oil and gas will be encountered are as follows:
   Water: Average depth to water: 400'. Minimum depth: 0'. Max: 400'. As reported from the New Mexico Office of the State Engineer website.

   Oil & Gas: 5,277' – 9,034' (Bell Canyon through Brushy Canyon)
   No other formations are expected to give up oil, gas, or fresh water in measurable quantities.

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4. Proposed Casing Program:

Hole Size	Casing Size	Depth	#/ft	Grade	Connection	Collapse	Burst	Tension
12 ¼"	9-5/8"	1103'	40	J-55	LT&C	4.98	7.66	11.79
8 ¾"	7"	9350'	29	HCP-110	BTC/TTRS-1	2.11	2.57	3.52
6 1/8"	4-1/2"	8400' - 13412'	13.5	HCP-110	BTC/TTRS-1	2.66	2.94	2.45

NOTE: ALL CASING IS NEW & API APPROVED. WHILE RUNNING CASING, PIPE WILL BE KEPT A MINIMUM OF 1/3 FULL AT ALL TIMES TO AVOID APPROACHING COLLAPSE PRESSURE OF THE CASING. SURFACE CASING WILL BE WATCHED & NECESSARY ADJUSTMENTS MADE TO ENSURE PIPE IF FULL DUE TO LOST CIRCULATION ZONES THAT MAY OCCUR. CENTRALIZERS WILL BE USED ON SURFACE, INTERMEDIATE, and PRODUCTION CASING.

5. Proposed Cement Program:
   a. 9-5/8" Surface
      Lead: 350 sks ExtendaCem Class C (13.7 ppg / 1.694 cuft/sk)
      Tail: 155 sks HalCem Class C (14.8 ppg / 1.326 cuft/sk)
      **Calculated w/ 100% excess on OH volume
   b. 7" Intermediate
      Lead: 500 sks Tuned Light Class H (9.0 ppg / 3.556 cuft/sk)
      Tail: 260 sks VersaCem Class H + 0.3% Super CBL + 0.2% Halad-9 retarder + 0.2% HR-800 retarder (14.4 ppg / 1.247 cuft/sk)
      **Calculated w/ 50% excess on OH volumes & 10% in CH
   c. 4 ½" Production
      Tail: 480 sks VersaCem Class H + 0.5 % Halad-344 + 0.4% Halad-322 + 0.4% HR-800 retarder (14.5 ppg / 1.227 cuft/sk)
      **Calculated w/ 20% excess in OH

NOTE: THE ABOVE CEMENT VOLUMES COULD BE REVISED PENDING FLUID CALIPER & CALIPER LOG DATA. ALL VOLUMES ARE DESIGNED TO CIRCULATE TO SURFACE OR OFF THE TOP OF THE LINER HANGER.

6. Minimum Specifications for Pressure Control:

13-5/8 (10M) working pressure BOP system consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer (please see BOP schematic). A 5M choke manifold & 120 gallon accumulator with floor and remote operating stations & auxiliary power system. Rotating head as needed. A KC will

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6. Minimum Specifications for Pressure Control:

13-5/8 (5M) working pressure BOP system consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer (please see BOP schematic). A 5M choke manifold & 120 gallon accumulator with floor and remote operating stations & auxiliary power system. Rotating head as needed. A KC will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP unit will be hydraulically operated. BOP will be NU and operated at least once a day while drilling and the blind rams will be operated when out of the hole during trips. From the base of the surface casing through running of production casing, the well will be equipped with a 5M BOP system. Below the surface casing shoe, this 5M system will be equipped with a HCR valve, remote kill line, & annular to match. The remote kill line will be installed prior to testing the system & tested to stack pressure.

Before drilling out of the surface casing, BOP will be tested by an independent surface company to 250 psi low & 5000 psi high. Hydril will be tested to 250 psi low and 2500 psi high. These low pressure tests from 250 to 300 psi will be held a minimum of 10 minutes if test is done with a test plug & 30 minutes without a test plug.

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be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP unit will be hydraulically operated. BOP will be NU and operated at least once a day while drilling and the blind rams will be operated when out of the hole during trips. From the base of the 9-5/8" csg through running of production liner, the well will be equipped with a 10M BOP system. Below the 9-5/8 csg shoe, this 10M system will be equipped with a HCR valve, remote kill line, & annular to match. The remote kill line will be installed prior to testing the system & tested to stack pressure.

Before drilling out of the 9-5/8 surface casing, BOP will be tested by an independent surface company to 250 psi low & 5000 psi high. Hydril will be tested to 250 psi low and 2500 psi high. These low pressure tests from 250 to 300 psi will be held a minimum of 10 minutes if test is done with a test plug & 30 minutes without a test plug.

7. Estimated BHP:

4065 psi @ 9,034' TVD

8. Mud Program: The applicable depths & properties of this system are as follows:

Depth	Type of System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0 – 1,103'	Fresh	8.4	29-32	NC
1,103' – 9,350'	OBM	8.8	50-60	-
9,350' – 13,412'	Cut Brine	8.8 - 9.2	28-32	<12

NOTE: NECESSARY MUD PRODUCTS FOR WEIGHT ADDITION & FLUID LOSS WILL BE ON LOCATION AT ALL TIMES. VISUAL MUD MONITORING EQUIPMENT (I.E. TRIP TANK) WILL BE IN PLACE TO DETECT VOLUME CHANGES INDICATING LOSS OR GAIN OF CIRCULATION VOLUME WITH ALARMS.

9. Auxiliary Well Control & Monitoring Equipment:
   a. A KC will be in the drill string at all times.

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b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times
c. H2S detection equipment will be in operation & breathing apparatuses will be on location after the drill out of the 9-5/8" casing shoe until the 4-1/2" liner is cemented.

10. Testing, Logging & Coring Program:
    a. No drill stem tests are planned.
    b. GR/N well log ran from KOP to surface.
    c. No coring is planned.

11. Potential Hazards:

No abnormal pressures or temperatures are expected. If H_2S is encountered, Endurance Resources LLC will comply with Onshore Order #6. Regardless, all personnel will be trained & qualified with H_2S safety. Rig safety equipment will all also be checked daily once drill out of the 9-5/8" casing shoe to TD. It has been noted that H_2S has been encountered in the salt section. If H_2S is encountered, measurements & formations will be reported to the BLM.

12. Anticipated starting date & Duration of Operations:

Road & location construction will begin after the BLM has approved the APD. Anticipated spud date will begin after BLM approval & after a drilling rig is secured. Move in operations & drilling is expected to take no more than 45 days. An additional 30-50 days will be needed to complete this well & construct surface facilities and/or lay flow lines in order to place well on production.

Endurance Resources, LLC

HALLIBURTON
Sperry Drilling Services

Project: Lea County, NM (NAD 83)
Site: Duo Sonic 29 Fed
Well: Duo Sonic 29 Fed 104H
Wellbore: Wellbore #1
Design: Plan #1
Rig: TBD

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SURFACE LOCATION			
US State Plane 1983 New Mexico Eastern Zone Elevation: GL 3219.7' + KB 25' @ 3244.70usft (TBD)			
Northing	**Easting**	**Latitude**	**Longitude**
399591.85	835639.63	32° 5' 41.972 N	103° 22' 58.703 W

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

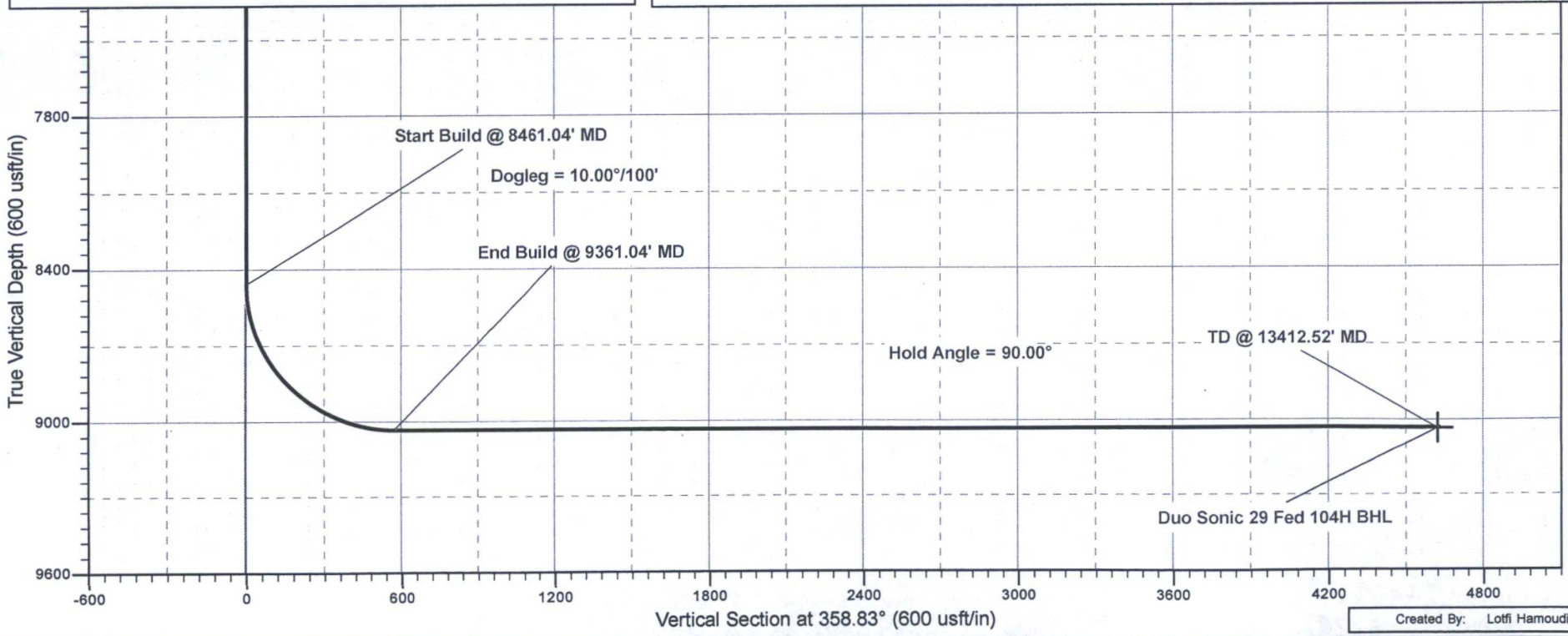
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Duo Sonic 29 Fed 104H BHL	9034.00	4623.48	-94.09	404215.32	835545.54	32° 6' 27.729 N	103° 22' 59.323 W

To convert a Magnetic Direction to a Grid Direction, Add 6.57°

Magnetic Model: BGGM2015 Date: 15-Mar-16
Azimuths to Grid North

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8461.04	0.00	0.00	8461.04	0.00	0.00	0.00	0.00	0.00	Start Build
9361.04	90.00	358.83	9034.00	572.84	-11.66	10.00	358.83	572.96	End Build
13412.52	90.00	358.83	9034.00	4623.48	-94.09	0.00	0.00	4624.43	TD



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Endurance Resources, LLC

HALLIBURTON
Sperry Drilling Services

Project: Lea County, NM (NAD 83)
Site: Duo Sonic 29 Fed
Well: Duo Sonic 29 Fed 104H
Wellbore: Wellbore #1
Design: Plan #1
Rig: TBD

SURFACE LOCATION

US State Plane 1983
New Mexico Eastern Zone
Elevation: GL 3219.7' + KB 25' @ 3244.70usft (TBD)

Northing	Easting	Latitude	Longitude
399591.85	835639.63	32° 5' 41.972 N	103° 22' 58.703 W

To convert a Magnetic Direction to a Grid Direction, Add 6.57°

Magnetic Model: BGGM2015 Date: 15-Mar-16
Azimuths to Grid North

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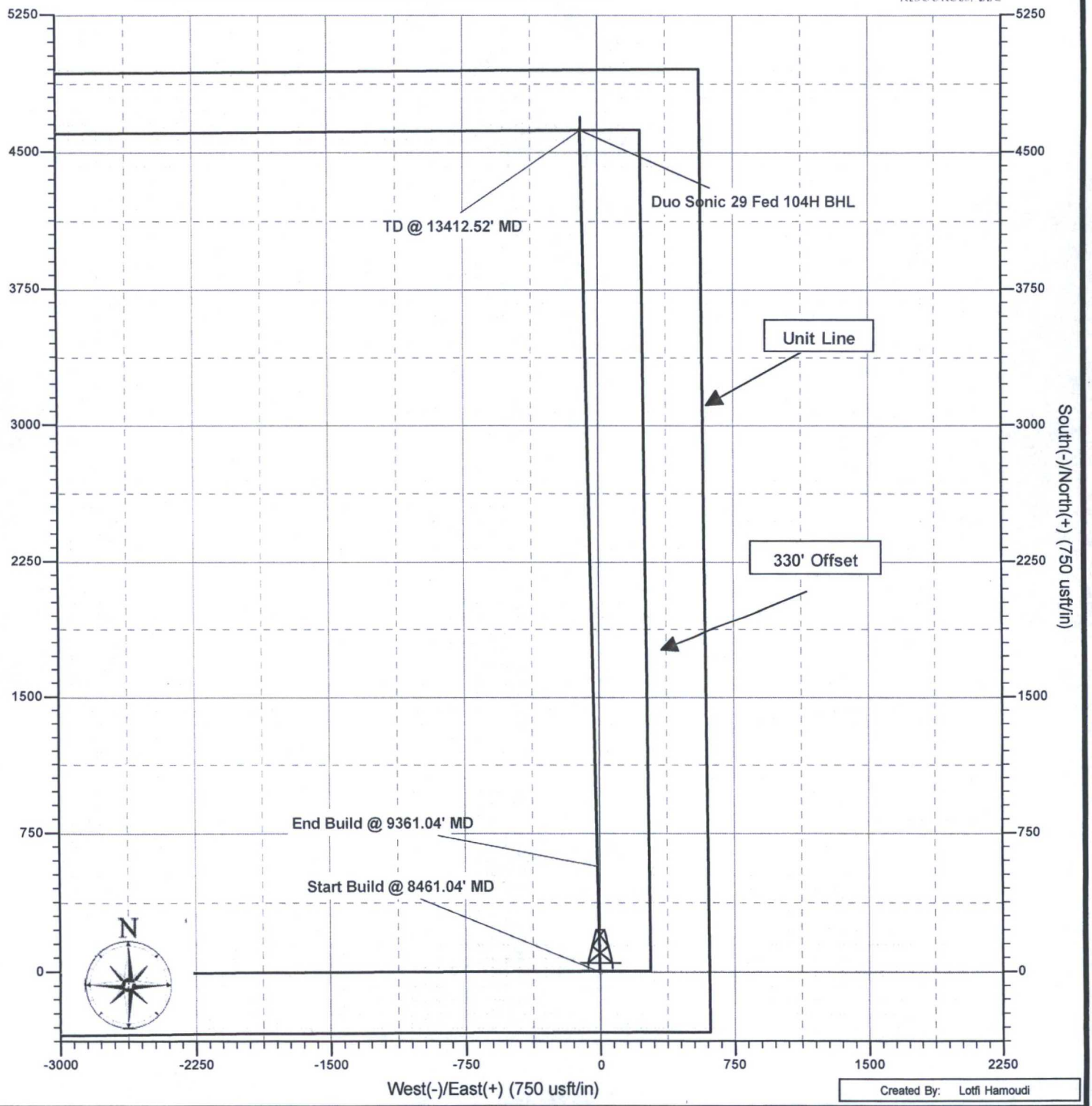

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