Form 3160-5 (March 2012)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

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FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2014

JUN 1 3 201 NMNM 18306

If Indian, Allottee or Tribe Name

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

SUBMI	T IN TRIPLICATE - Other	7. If Unit of CA/Agree	ement, Name and/or No.	
1. Type of Well				
☑ Oil Well ☐ Gas V	Vell Other	8. Well Name and No. Stratocaster 20 Fed		
Name of Operator Endurance Resources LLC	/		9. API Well No. 30-025-37295	/
3a. Address		3b. Phone No. (include area c	ode) 10. Field and Pool or I	Exploratory Area
PO Box 1466; Arlesia, NM 88211		575.308.0722	Bell Lake; Bone Spr	ings / Va
4. Location of Well (Footage, Sec., T., 660' FSL & 660' FWL; Sec 20-23S-34E	K., M., or Survey Description	j	11. County or Parish, S	State .
DBU FSE & DBU FWE; Sec 20-235-34E			Lea Co NM	·
12. CHEC	CK THE APPROPRIATE BO	OX(ES) TO INDICATE NATUR	RE OF NOTICE, REPORT OR OTH	ER DATA
TYPE OF SUBMISSION		T	YPE OF ACTION	
✓ Notice of Intent	Acidize	Deepen Deepen	Production (Start/Resume)	Water Shut-Off
Notice of finesic	Alter Casing	Fracture Treat	Reclamation	Well Integrity
Subsequent Penert	Casing Repair	New Construction	Recomplete	Other EXPAND SURFACE
Subsequent Report	Change Plans	Plug and Abandon	Temporarily Abandon	LOCATION &
Final Abandonment Notice	Convert to Injection	Plug Back	Water Disposal	SIDETRACK
		41	1 / 1 1 1 1	

- 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 recomplete 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 recompletion 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.)
- 1) MIRU PU. POOH w/ existing production equipment laying down.
- 2) Set & test CIBP @ 10,250 over existing Bone Spring perfs (10,300-10,608) & test to 2500psi. Dump bail 35' Class H cement to isolate existing perfs.
- 3) Set CIBP @ 9,925'. Test to 1000psi to ensure CIBP is holding.
- 4) Set whipstock @ ~9,925'. RDMO PU. WO drilling rig.
- 5) MIRU drilling rig. Sidetrack out of 7" casing with 6-1/8" bit to 14,542' MD (10,500' TVD).
- 6) Run 4-1/2" 13.5 #/ft BTC P-110 csg from 9,725' TVD to 14,452' MD / 10,500' TVD. (TOL to TD).
- 7) Cement 4-1/2" csg w/ 235 sxs (50:50) Cl H cmt + 1#/sx salt + 0.5% Halad 344 + 0.3% CFR-3 + 0.75% HR-601 + FW. (15 ppg/ 2.63 cu/ft).
- 8) Complete well in Bone Springs formation & turn over to production.

See attached C-102, 4-1/2" csg program, design factors, mud program, pressure control equipment, cement program, & current/proposed schematics.

SEE ATTACHED FOR CONDITIONS OF APPROVAL

		·
14. Thereby certify that the foregoing is true and correct. Name (<i>Printed/Typed</i>) Kale Jackson 575.914.3355	Title Sr Completions Engineer	
Signature	Date 04/18/2013	
THIS SPACE FOR FEDE	RAL OR STATE OFFICE USE	
Approved by	Petroleum Engineer	JUN 2.6 2013
Conditions of approval, if any, are attached. Approval of this notice does not warrant or c that the applicant holds legal or equitable title to those rights in the subject lease which we entitle the applicant to conduct operations thereon.	ertify	

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.



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Endurance Resources LLC

DRILLING & OPERATIONS PROGRAM

Stratocaster 20 Fed #1H

SHL: 660' FSL & 660' FWL

BHL: 330' FNL & 660' FWL

Sec 20-23S-34E Lea Co, NM

CASING PROGRAM:

HOLE SIZE	HOLE INTERVAL	OD CSG	CASING INTERVAL	WEIGHT	COLLAR	GRADE
6-1/8"	9,925' – 14,542	4-1/2"	9,725' – 14,542'	13.5#	втс	P-110

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

DESIGN FACTORS:

COLLAPSE DESIGN CASING SIZE FACTOR		BURST DESIGN FACTOR	TENSION DESIGN FACTOR
4-1/2" 13.5# P-110			
ВТС	2.01	2.33	1.86

MUD PROGRAM:

				TYPE OF
DEPTH	MUD WEIGHT	VISC	FLUID LOSS	SYSTEM
0 - 14,542'	8.9 - 9.3	28 - 30	NC	CUT BRINE

PROPOSED CEMENT PROGRAM:

TAIL: 235 SXS (50:50) CLASS H CMT + 1#/SX SALT + 0.5% HALAD 344 + 0.3% CFR-3 + 0.75% HR-601 + FW. (15 PPG/ 2.63 cu/ft).

NOTE: CMT VOLUMES CALCULATED ON 15% EXCESS. ACTUAL CEMENT VOLUMES WILL BE ADJUSTED BASED ON FLUID CALIPER & CALIPER LOG DATA TO ENSURE CEMENT IS BROUGHT BACK TO LINER TOP.

PRESSURE CONTROL:

NIPPLE UP ON 13-3/8 2M SYSTEM TESTED TO 50% OF RATED WORKING PRESSURE BY INDEPENDENT TESTER.

NIPPLE UP ON 9-5/8 WITH 3M SYSTEM TESTED TO 3000PSI BY INDEPENDENT TESTER.



PIPE RAMS WILL BE OPERATIONALLY CHECKED EACH 24 HOUR PERIOD. BLIND RAMS WILL BE OPERATIONALLY CHECKED ON EACH TRIP OUT OF THE HOLE. THESE CHECKS WILL BE NOTED ON THE DAILY TOUR SHEETS. A 2" KILL LINE & A 3" CHOKE LINE WILL BE INCLUDED IN THE DRILLING SPOOL LOCATED BELOW THE RAM-TYPE BOP. OTHER ACCESSORIES TO BOP EQUIPMENT WILL INCLUDE A KELLY COCK & FLOOR SAFETY VALVE (INSIDE BOP), CHOKE LINES, AND CHOKE MANIFOLD WITH 3000PSI WP RATING.

ENDURANCE WILL TEST BOP AS SOON AS IT IS INSTALLED & PRIOR TO CUTTING CASING WINDOW.

POTENTIAL HAZARDS:

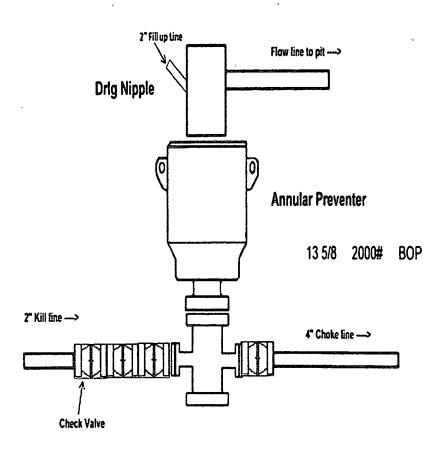
THE EXISTING PALOMA 20-1 WELL HAS BEEN PRODUCING IN THE PROSPECTIVE HORIZONTAL TARGET SINCE 2011. NO ABNORMAL PRESSURES OR H2S IS TO BE EXPECTED. IF H2S IS ENCOUNTERED, ENDURANCE RESOURCES LLC WILL COMPLY WITH ONSHORE ORDER #6. REGARDLESS, ALL PERSONNEL WILL BE TRAINED & QUALIFIED WITH H2S SAFETY & RIG SAFETY EQUIPMENT WILL BE CHECKED DAILY.

LOCATION & OPERATIONS:

- LOCATION EXPANSION WILL NOT COMMENCE UNTIL THE BLM HAS APPROVED THE APD.
 ENDURANCE WILL USE THE EXISTING ROAD INTO LOCATION & WILL NOT GO BEYOND
 THIS ROAD IN ANYWAY.
- ALL CALICHE USED FOR THE PAD EXPANSION WILL BE OBTAINED FROM AN EXISTING BLM APPROVED PIT OR FROM DEPOSITS FOUND UNDER THE LOCATION. SPOIL PIPE, IF ANY, WILL BE PUSHED TO THE NW QUARTER OF LOCATION FROM THE PAD EXPANSION.
- ENDURANCE WILL USE EXISTING FACILITIES ALREADY IN PLACE ON THE NORTH & NE QUARTER OF LOCATION.
- DRILLING RIG LAYOUT & DIMENSIONS ARE ATTACHED. THESE DIAGRAMS SHOW THE LOCATION OF EQUIPMENT TO BE PLACED ON LOCATION. MUD PITS IN THE CIRCULATING SYSTEM WILL BE STEEL PITS, AND A CLOSED LOOP SYSTEM WILL BE UTILIZED. ALL WASTE MATERIAL FROM DRILLING OPERATIONS WILL BE HAULED OFF TO CRI OR BLM APPROVED LANDFILL.
- FLOWBACK OR PW WILL BE HAULED TO AN APPROVED
- ALL WELL SITE WASTE MATERIAL (I.E TRASH) WILL BE CONTAINED IN CLOSED TRASH
 TRAILER CAGES & PORTO-JOHN'S WILL BE USED FOR GRAY WATER WASTE
 MANAGEMENT.
- PROPOSED INTERIM RECLAMATION IS ATTACHED WITH SITE LAYOUT. SITE SAFETY WAS TAKEN INTO CONSIDERATION WHEN DRAWING UP THIS PROPOSAL.
- HAD ONSITE WITH TRISH BADBEAR 4/15/13

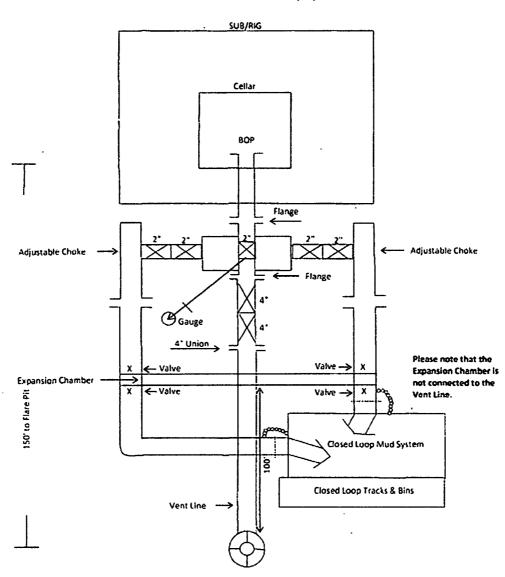


2,000 psi BOP Schematic



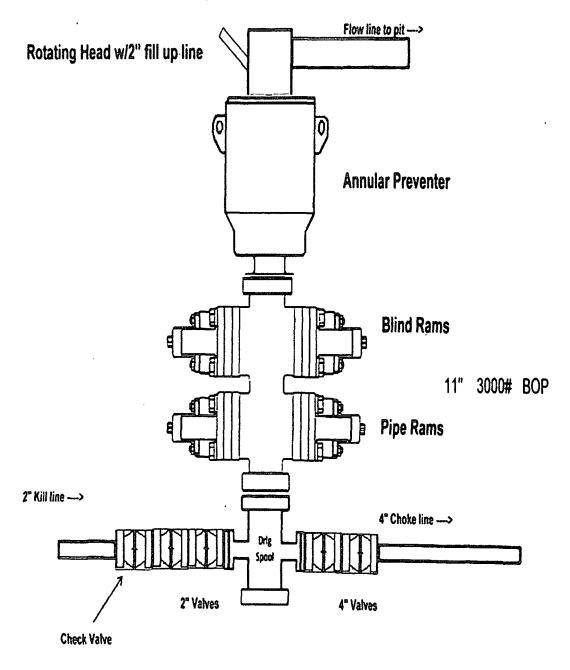


2M Choke Manifold Equipment



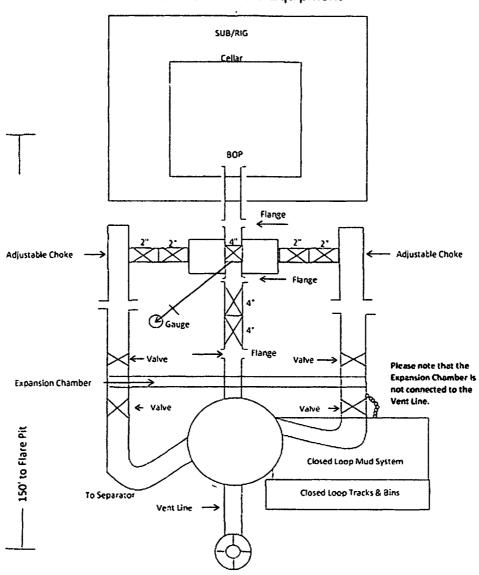


3,000 psi BOP Schematic

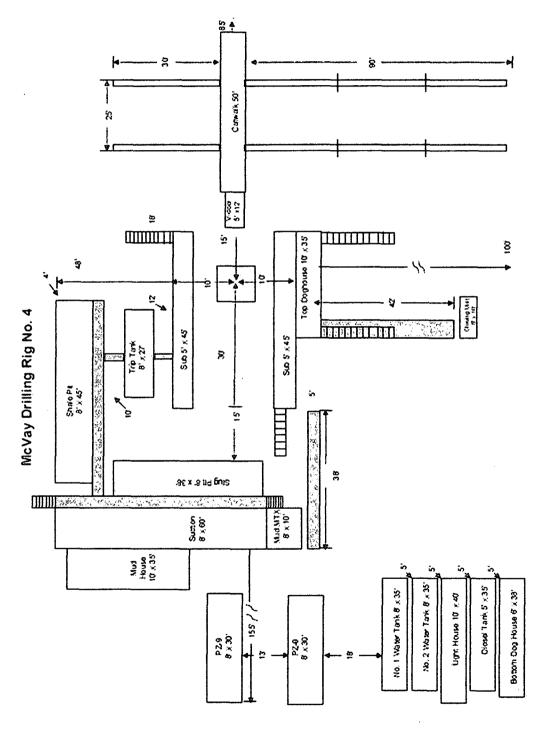


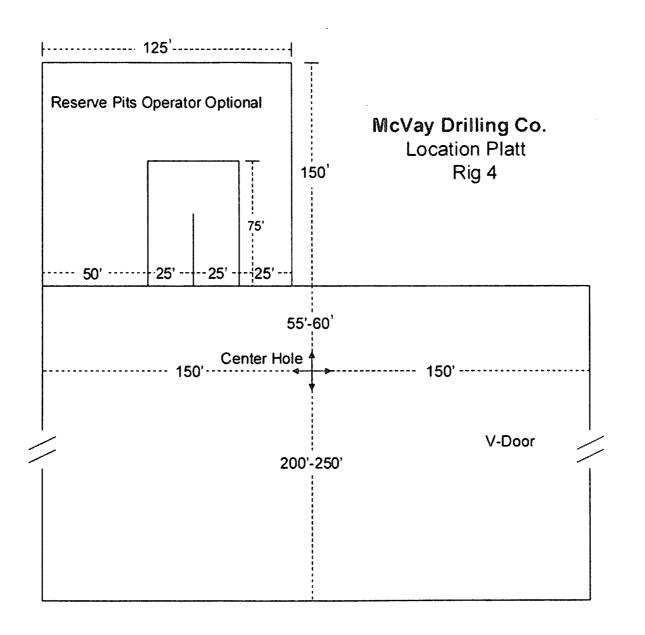


3M Choke Manifold Equipment





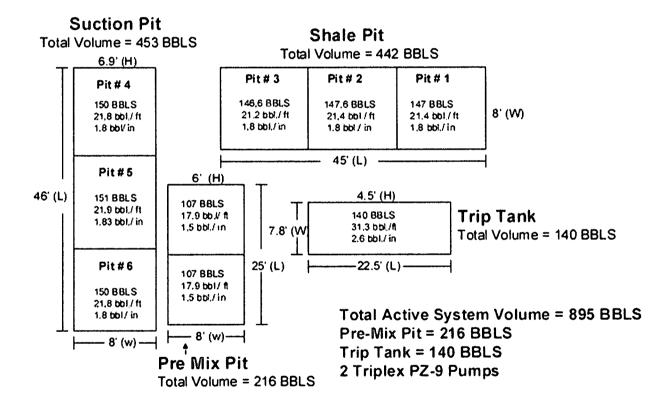






McVay Drilling Co.

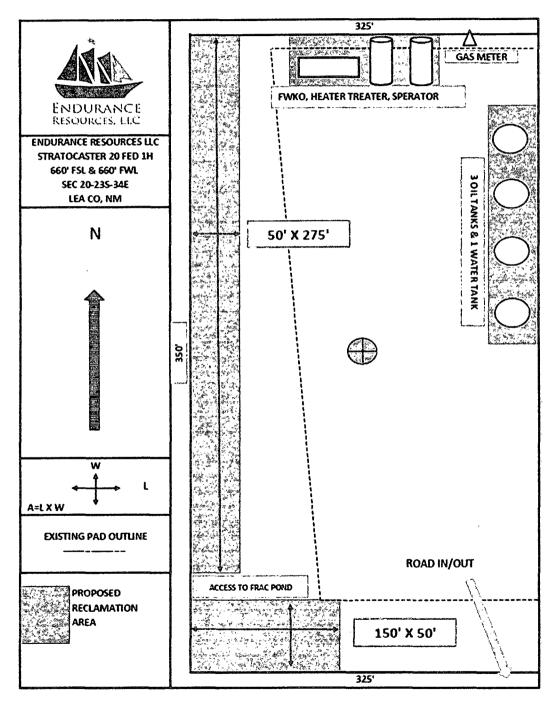
Rig # 4 - Pit System







PROPOSED INTERIM SITE RECLAMATION





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Lea County, NM (NAD 83) Stratocaster 20 Fed Stratocaster 20 Fed #1H

Wellbore #1

Plan: Plan #3

Sperry Drilling Services

Standard Report

16 April, 2013

Weil Coordinates: 468,299.51 N, 799,333.76 E (32° 17'04.61" N, 103° 29' 54.52" W) Ground Level: 3,562.50 ft

Local Coordinate Origin:

Centered on Well Stratocaster 20 Fed #1H

Viewing Datum: GE 3552" + KB 19" @ 3583.00f; (Original Well Elev)

TVDs to System:

North Reference:

Unit System:

API - US Survey Feet

Version: 2003.16 Butd: 431

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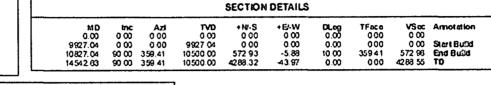
Endurance Resources LLC

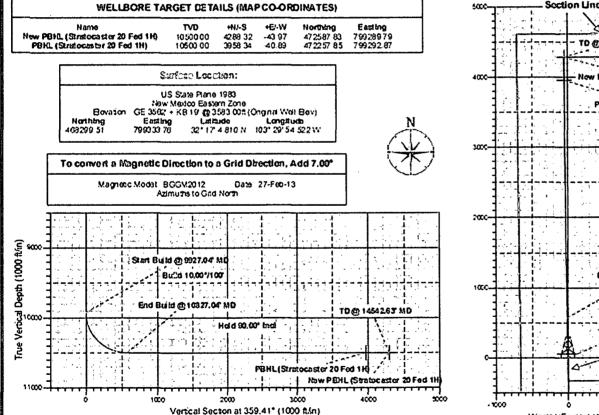
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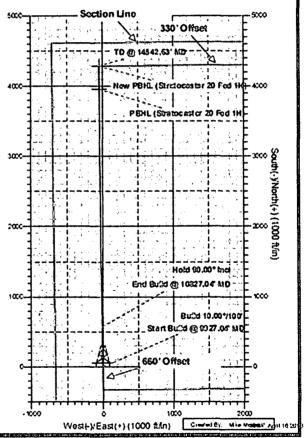
Sporry Drilling Services

Project: Lea County, NM (NAD 83) Site: Strato caster 20 Fed Well: Stratocaster 20 Fed #1H Wellbore: Wellbore #1 Plan: Plan #3 Rig: Original Well Elev

SECTION DETAILS									
MD	tnc	Azi	TVD	+N/-S	+E/-W	DLog	TFace		Annotation
0.00	0 00	0.00	0 00	0 00	0 00	0.05	0.00	0.00	
9927.04	0.00	0.00	9927 C4	0 00	0.00	0.03	000	0.00	Start Build
10827.04	90 00	359.41	10500 00	572 93	-5.88	10 00	35941	572 98	End Build
14542.63	90 00	359.41	10500.00	4288.32	43.97	0.00	0.00	4288 55	TO











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Endurance Resources LLC Lea County, NM (NAD 83)

Plan Report for Stratocaster 20 Fed #1H - Plan #3

Measured Depth (ft)	inclination (")	Aztmuth (°)	Vertical Depth (ft)	+NJ-S (ft)	+61 4 A +614A	Vertical Section (ft)	Dogleg Rate (*/100ft)
13,800.00	90.00	359.41	10,500.00	3,545.73	-36.36	3,545.92	0.00
13,905.00	90.00	359,41	10,500.00	3,645.72	-37.38	3,645.92	0.00
14,009.60	90.00	359,41	10,500.00	3,745.72	-38,41	3,745.92	0.00
14,100.00	90.00	359,41	10,500.00	3,845.71	-39.44	3,845.92	0.00
14,200.00	90.00	359.41	10,500.00	3,945,71	-40.46	3,945.92	0.00
14,300.00	90.00	359.41	10,500.00	4,045,70	-41,49	4,645.92	0.00
14,400.00	90.00	359.41	10,500.00	4,145.70	-12.51	4,145.92	0.00
14,500.00	90.00	359.41	10,500.00	4,245.69	-43.54	4,245.92	9.00
14,542.63	90.00	359.41	10,500.00	4,288.32	-43.97	4,288.55	0.00
TD @ 1454	CS. MD						

Plan Annotations

Measured	Vertical	Local Coor	@nates		
Depth (ft)	Depth (ft)	+N/-S (ft)	-E/-W	Comment	
9,927,04	9,927.04	0.00	0.60	Start Build @ 9927.84" MD	
9,927.04	9,927.04	0.00	0.00	Buba 10.007100*	
10,827,04	10,500.00	572.93	-5.87	End Bulld @ 10827.04" MD	
10,827.04	10,500,00	572.93	-5.83	Hold 90,00° Incl	
14.542.63	10,500,00	4.288.32	-43.97	TD @ 14542.63' MD	

Vertical Section Information

	Angle			Origin	Ortg	gin nig	Start		
	Туре	Target	Azimuth (*)	Туре	+1U_S (f0)	-EJ-₩ (ft)	TVD (fl)		
το		No Targe: (Freehand)	359.41	Slot	0.00	0.00	0.00		

Survey tool program

From	To		Survey/Plan	Survey Tool		
(f1) 0.00	(ft) 14,542.63	Plan #3		MWD+SC		

Targets

Target Name - hit/miss target - Shape	Oip Angte (°)	Dip Otr. (")	TVD (III)	-NJ-S (ff)	+E/-W (ft)	Northing (fl)	Easting (ft)	Latitude	Longitude
New PBHL (Stratoca - plan hits target o - Point	0.00 center	0.60	10,500.00	4,288.32	43.97	472,587,83	799,289,79	32° 17' 47.246 N	103° 29′ 54.645 W
PBHL (Stratocaster: - plan filts larget o - Point	0.00 center	0.07	10,550.06	3,958.34	~ 0.89	472,257.85	799,292.87	32° 17° 43.980 N	103° 29° 54.639 W



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Endurance Resources LLC Lea County, NM (NAD 83)

North Reference Sheet for Stratocaster 20 Fed - Stratocaster 20 Fed #1H - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to GE 3562" + KB 19" @ 3583.001 (Onginal Well Elev). Northing and Easting are relative to Stratocaster 20 Fed #1H Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, etipsoid GRS 1980 Projection method is Transverse Mercator (Gauss-Kruger)

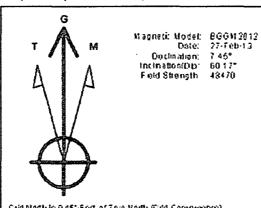
Central Meridian is 1041 2010.000 W1, Longitude Origin:01010.000 E1, Latitude Origin:01010.000 N1 False Easting: 541,337.50ft, False Northing: 0.00ft, Scale Reduction: 0.99993531

Grid Coordinates of Well: 458,299.51 ft N, 799,333.75 ft E

Geographical Coordinates of Well: 32* 17* 04.81* N, 103* 29* 54.52* W Grid Convergence at Surface Is: 0.45*

Based upon Minimum Curvature type calculations, at a Measured Depth of 14,542.63ft the Bottom Hole Displacement is 4,288.55ft in the Direction of 359.41* (Grid).

Magnetic Convergence at surface Is: -7.00" (27 February 2013, . BGGM2012).



Cris North is 0.45° East of True North (Cris Convergings) agricile North is 7.45° East of True North (Magnetic Decimation) gnetic North is 7.00° East of Grid North (Magnetic Convergence)

To convert a True Direction to a Grid Direction, Subbact 0.45° convert a Magnetic Direction to a True Direction, Ada 7.45° East To convert a Magnetic Direction to a Ord Direction, Add 7.00°



