



Company: Conoco Phillips
Well: UL 20 Gold Spoon 2904H

API#: 42-301-36072

Rig Name: Production

State/County: Texas/Loving

VS-Azi: 0.00 Degrees

Latitude: 31.67511, Longitude: -103.32936

Grid North = True North +1.54 degs (NAD 27)

Grid Correction Applied = +1.54 degs



Depth Reference : RKB = 32 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Error Model: VESSI_GYROFLEX.IPM

Filename: ul 20 gold spoon 2904h-de_01.ut

Minimum Curvature Method

Report Date/Time: 11/21/2022 / 10:19

Vaughn Energy Services Inc.

API: 42-301-36072

PO Box 728 Cisco, Texas 76437

817-741-5746

David Miller

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
132.00	0.77	345.55	132.00	0.86	-0.22	0.86	0.89	345.55	0.59
232.00	1.21	334.15	231.98	2.47	-0.85	2.47	2.61	340.97	0.47
332.00	0.94	305.28	331.96	3.89	-1.98	3.89	4.37	333.02	0.59
432.00	0.91	265.38	431.95	4.30	-3.44	4.30	5.51	321.32	0.63
532.00	1.14	262.19	531.94	4.10	-5.22	4.10	6.64	308.13	0.24
632.00	0.65	238.84	631.92	3.67	-6.70	3.67	7.64	298.75	0.61
732.00	0.55	235.04	731.92	3.11	-7.57	3.11	8.18	292.34	0.11
832.00	0.62	244.51	831.91	2.60	-8.45	2.60	8.84	287.12	0.12
932.00	0.85	259.22	931.90	2.23	-9.67	2.23	9.92	282.99	0.29
1032.00	1.56	253.29	1031.88	1.70	-11.70	1.70	11.82	278.26	0.73
1078.00	1.09	236.14	1077.87	1.27	-12.67	1.27	12.73	275.74	1.33

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
HORIZONTAL DISPLACEMENT IS 12.73 FEET AT 275.74 DEGREES									



I David Miller certify that I am employed by Vaughn Energy Services Inc.
That I did on the day(s) of 11/16/2022 conduct or supervise the taking of a
Rate Gyro survey from a depth of 0.00 feet to a depth of 1,078.00
feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services
Inc., that I am authorized and qualified to make this report; that this survey was conducted at the request of
Conoco Phillips for the UL 20 Gold Spoon 2904H
API# 42-301-36072 in Texas County/ Parish Loving
; and I have reviewed this report and find that it conforms to the principles and procedures as set forth by Vaughn
Energy Services Inc.

Service Technician
Vaughn Energy Services Inc.

OPERATOR: PDEH LLC

WELL LOCATION

LEASE NAME & WELL NO.:

UL 20 GOLD SPOON #2904H

LEASE ADDRESS:

640.700 ACRES (CALLED)

NEAREST TOWN IN COUNTY:

±16.0 MILES SOUTHEAST OF MENTONE, TEXAS

DESCRIPTION:

S.H.L./P.P./F.T.P.: SECTION 29, BLOCK 20, UNIVERSITY LAND SURVEY

L.T./B.H.L.: SECTION 29, BLOCK 20, UNIVERSITY LAND SURVEY

LOVING COUNTY, TEXAS

SCALE: 1" = 100'

0 500' 1000'

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VES Bottom Hole Location is 12.73' @ 275.74° of Surface Location

PRODUCTIVE LATERAL

LENGTH (F.T.P. TO L.T.P.)
SS 5,385'
TOTAL 5,385'

TIES TABLE

POINT	LEASE	SURVEY/SECTION
S.H.L.	1547 FUEL	1547 FUEL & 297 FUEL
P.P./	2047 FUEL	2047 FUEL & 100 FUEL
F.T.P.	100 FUEL	100 FUEL
L.T.P.	2047 FUEL	2047 FUEL & 100 FUEL
B.H.L.	100 FUEL	100 FUEL

LEGEND:

-----	Lease Boundary
-----	Approximate Location County Line
-----	Section Line
-----	Proposed Well Path
-----	Existing/Permitted Well Path
-----	Monument Found
-----	Calculated Corner
-----	Well Point



John R. Anderson 7/12/2022
John R. Anderson, R.P.L.S. No. 6442



1630 EVERMAN PARKWAY, STE. 140 - FT. WORTH, TEXAS 76149
TELEPHONE: (817) 744-1512 - FAX: (817) 744-1504
TEXAS PROFESSIONAL SURVEYOR REGISTRATION NO. 6442
WWW.TOPOGRAFIC.COM

UL-20-29-P4 UL 20 GOLD SPOON #2904H	REVISION:		NOTES:
	INT	DATE	
DATE: 07/11/2022			1. ORIGINAL DOCUMENT SIZE: 11"x17"
FILE: LO UL 20 29 P4 GOLD SPOON #2904H			2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1983, UNLESS OTHERWISE NOTED.
DRAWN BY: A.C.L./O.M.			3. THIS LOCATION AND BOUNDARY SURVEY HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED BY PERMAN OIL&GAS ENTERPRISES HOLDINGS, LLC. THIS PLAN WAS CREATED FOR THE SOLE PURPOSE OF PLACING A PERMIT WITH THE RAILROAD COMMISSION OF TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.S.P.S. MINIMUM STANDARDS OF PRECISION FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND SUBMITTED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAN AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
SHEET: 1 OF 1			4. ALL ELEVATION VALUES CONTAINED HEREIN ARE ORTHOMETRIC ONLY, BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 83), U.S. SURVEY FEET.
			5. ALL MINERAL OWNERSHIP DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY PERMAN OIL&GAS ENTERPRISES HOLDINGS, LLC OR ITS SUBSIDIARIES & AFFILIATES.

NOTES CONT'D:
6. THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF JUNE 18, 2022.
7. S.H.L. = SURFACE HOLE LOCATION
8. P.P. = POINT OF PENETRATOR
9. F.T.P. = FIRST TIE POINT
10. L.T.P. = LAST TIE POINT
11. B.H.L. = BOTTOM HOLE LOCATION

VES Bottom Hole Location is		12.73' @ 275.74°		of Surface Location	
MD / FT	1078'			1077.87'	TVD / FT
North / FT	South / FT			East / FT	West / FT
1.27'					12.67'

Proposed Azimuth:	333.95
Target Inclination:	0.00

[illegible]

OPERATOR: PDEH LLC

WELL LOCATION

LEASE NAME & WELL NO.:

UL 20 GOLD SPOON #2904H

LEASE ACREAGE:

640.700 ACRES (CALLED)

NEAREST TOWN IN COUNTY:

±16.0 MILES SOUTHEAST OF MENTONE, TEXAS

DESCRIPTION:

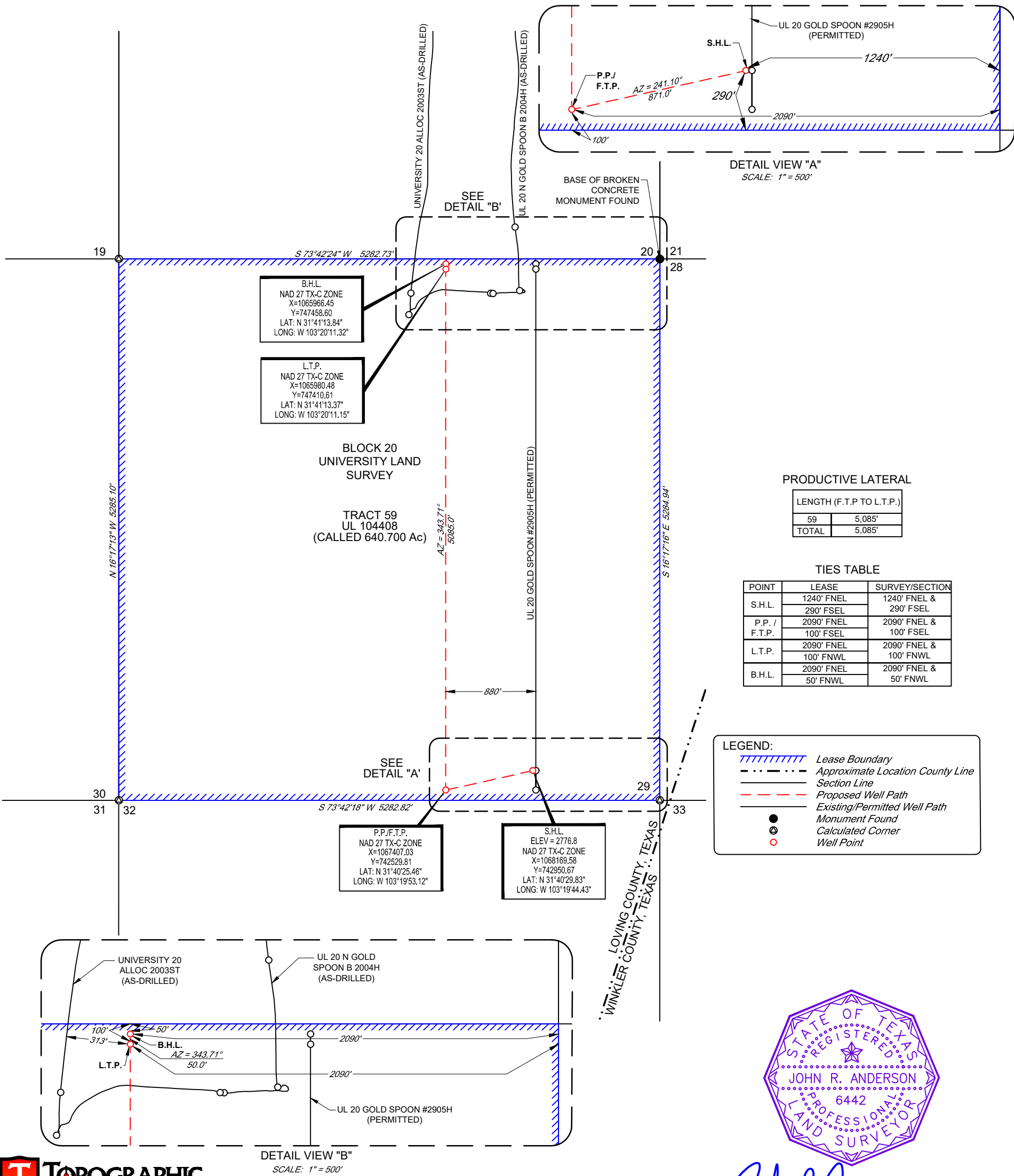
S.H.L./P.P./F.T.P.: SECTION 29, BLOCK 20, UNIVERSITY LAND SURVEY

L.T.P/B.H.L.: SECTION 29, BLOCK 20, UNIVERSITY LAND SURVEY

LOVING COUNTY, TEXAS



SCALE: 1" = 1000'
0' 500' 1000'



PRODUCTIVE LATERAL

LENGTH (F.T.P. TO L.T.P.)	
59	5,085'
TOTAL	5,085'

TIES TABLE

POINT	LEASE	SURVEY/SECTION
S.H.L.	1240' FNEL	1240' FNEL & 290' FSEL
	290' FSEL	290' FSEL
P.P. / F.T.P.	2090' FNEL	2090' FNEL & 100' FSEL
	100' FSEL	100' FSEL
L.T.P.	2090' FNEL	2090' FNEL & 100' FNWL
	100' FNWL	100' FNWL
B.H.L.	2090' FNEL	2090' FNEL & 50' FNWL
	50' FNWL	50' FNWL

LEGEND:

- Lease Boundary
- Approximate Location County Line
- Section Line
- Proposed Well Path
- Existing/Permitted Well Path
- Monument Found
- Calculated Corner
- Well Point

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM



John R. Anderson 7/12/2022
John R. Anderson, R.P.L.S. No. 6442

UL-20-29-P4 UL 20 GOLD SPOON #2904H	REVISION:		NOTES:	NOTES CONT'D:
	INT	DATE		
DATE: 07/11/2022			1. ORIGINAL DOCUMENT SIZE: 11" X 17" 2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927. UNLESS OTHERWISE NOTED. 3. THIS LOCATION AND/OR UNIT/LEASE BOUNDARY HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED BY PERMIAN DELAWARE ENTERPRISES HOLDINGS, LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE RAILROAD COMMISSION OF TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY. 4. ALL ELEVATION VALUES CONTAINED HEREON ARE ORTHOMETRIC ONLY, BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), U.S. SURVEY FEET. 5. ALL MINERAL OWNERSHIP DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY PERMIAN DELAWARE ENTERPRISES HOLDINGS, LLC OR ITS SUBSIDIARIES & AFFILIATES.	6. THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF JUNE 18, 2022. 7. S.H.L. = SURFACE HOLE LOCATION 8. P.P. = POINT OF PENETRATION 9. F.T.P. = FIRST TAKE POINT 10. L.T.P. = LAST TAKE POINT 11. B.H.L. = BOTTOM HOLE LOCATION
FILE: LO_UL_20_29_P4_GOLD SPOON_#2904H				
DRAWN BY: A.C.L./O.M.				
SHEET: 1 OF 1				



Survey Certification Letter

November 30, 2022

State of Texas
County of Loving

I, Roger Dubose, certify that; I am employed by **Integrity Services, LLC**; that I did on the day(s) of through 11/04/2022 through 11/09/2022 conducted and / or supervised the MWD survey(s) taken from the depth of 120 feet to depth of 1174 feet; that the data is true, correct, complete and within the specifications and limitations of the survey tool provided by **Integrity Services, LLC**; that I am authorized and qualified to make this survey report; that was requested by **Conoco Phillips** for the surveys performed on the **UL 20 Gold Spoon 2904H**, API No. **42-301-36072**. In **Loving** County, Texas; and that I have reviewed this report and find that it conforms to the principles and procedures set forth by **Integrity Services, LLC**.

Roger Dubose

Roger Dubose
Directional Manager
P.O. Box 5989 | Midland, TX 79704
Office: 432-661-6075
roger.dubose@integrity-serv.com